Fulton Hogan
LAND DEVELOPMENT LTD.

WOODS
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B&A
Urban & Environmental

Volume 2: Milldale

Stages 10 - 13

Milldale, Wainui

Fast-track Approvals Act 2024 Substantive Application

28 March 2025

Status:

Final Revision 1

Date:

28 March 2025

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Contents

Volume 2 Appendices

1.0 Introduction

This report, referred to as **Volume 2**, of the Substantive Application has been prepared in support of the application by Fulton Hogan Land Development Limited (**FHLD**) for a consent to the Environmental Protection Authority (**EPA**) under the Fast-Track Approvals Act 2024 (**FTAA**). The 71 ha site subject to this part of the application is located within the Milldale development and referred to as Milldale Stages 10 - 13.

This application is seeking approval for land use and subdivision resource consent to authorise the Milldale Stages 10 – 13 subdivision and bulk earthworks. The proposal involves the creation of the following lots in accordance with the Wainui Precinct Plan contained in the Auckland Unitary Plan: Operative in Part 2016 (**AUP(OP)**):

- 623 vacant residential lots;
- 27 residential superlots with capacity to accommodate approximately 296 dwellings;
- 1 Neighbourhood Centre superlot with capacity to accommodate approximately 855m² of commercial floorspace;
- 2 Land in Lieu Neighbourhood Parks;
- 21 local purpose (drainage) reserves; and
- Lots containing the associated roading and pedestrian network.

The overall design rationale for the Stages 10 – 13 subdivision is to create a high amenity residential development (as has occurred in Stages 1-9 of the Milldale development) that responds positively to on-site features and provides good connections to the wider open space network. It continues the design rationale that has been applied to earlier stages of the Milldale development, which is consistent with best practice urban and landscape design principles. The development will provide housing supply and choice to the residential market and provide a high amenity urban residential form with well-planned connectivity to key amenities and services in Milldale. Overall, the proposal will enable residential development to progress in accordance with the AUP(OP), including the Wainui Precinct Plan.

The information provided in this application is sufficiently detailed to correspond to the scale and significance of the matters that will be assessed in considering whether to grant the approvals sought, including any adverse effects of the activities to which the approvals relate. This takes into account any proposal by the applicant to manage the adverse effects of an activity through conditions.

The Overview Report, submitted as Volume 1 of this application, is to be read in conjunction with this document. The Overview Report provides a summary of the background to the Milldale development, a summary of the consenting history, consultation, a summary of the reasons for consent, and the proposed conditions of consent. It also addresses the specific information requirements to be included with a Fast Track application as set out under the FTAA.

2.0 Milldale Stages 10 – 13 Site Context

This section of the application is provided in accordance with clause 1(b) of Schedule 5 of the FTAA.

2.1 Site Description

The site addressed in this volume of the AEE is located within the wider Milldale development and referred to as the Milldale Stages 10 – 13 subdivision areas (**the Site**). Stages 10 – 13 are located within the northern and western extents of the Milldale development (**Figure 1**) and comprise the remaining undeveloped greenfield stages of Milldale. Overall, the Site covers a total area of 71 ha. The Greenfield subdivision stages are discussed in Section 3.2 below.

The area proposed for stream and wetland offset works is at 231 & 173 Upper Orewa Road and is within an approximate geographical location north of Wainui Road (**the Offset Site**). The site is zoned Rural Production Zone and sits outside the Rural Urban Boundary (**RUB**). The offset site will accommodate offset restoration and enhancement planting associated with the filling of wetlands and streams and is owned by FHLD. A full description of the offset site is provided in Section 2.10.3 below.

Copies of Records of Title for the site are attached at **Appendix 1A** of the Overview Report. A broad summary of the site and locality details is provided below.

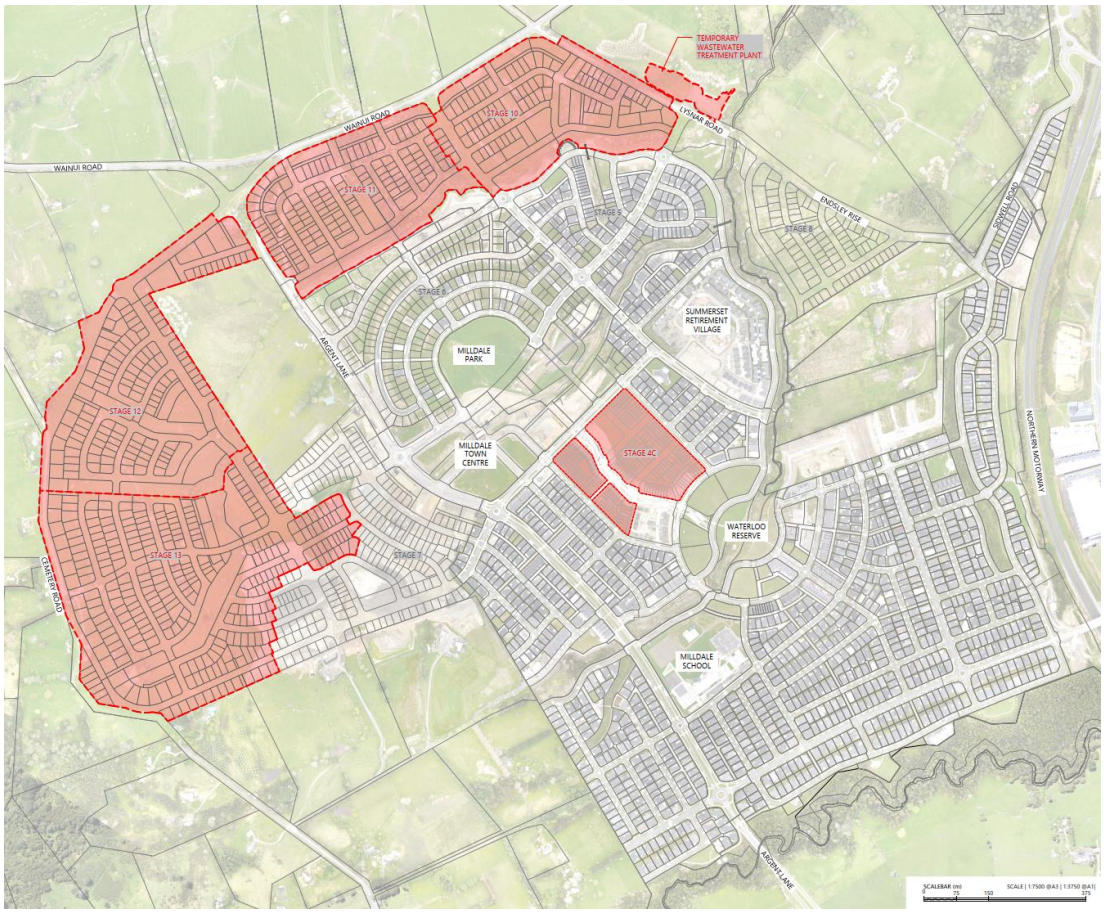

Figure 1: Site Location Plan

2.2 Surrounding Environment

Stages 10 – 13 are located within the northern part of the Milldale development area. Previously approved Stages 5, 6 and 8 are located to the south of the site, and Stage 7 is located to the southwest. Further south are the completed stages of Milldale, which include residential lots, the Local Centre, the Summerset Retirement Village and the recently completed primary school. This area is undergoing a transitional phase from pastureland into a growing urban community.

The wider environment directly to the north of Stages 10-11 is zoned Future Urban Zone (FUZ) and is characterised by a range of rural land uses.

Silverdale and the Highgate Business Park are located to the east of the Site on the eastern side of State Highway 1. The Millwater residential development is also located on the eastern side of State Highway 1 and consists of low—to medium-density residential housing. Orewa is located 5km to the north, Helensville is 20km to the West, and Auckland CBD is located approximately 40km to the South.

2.3 147 Argent Lane

147 Argent Lane, identified as Lot 4 DP 151229 (NA90A/714) in Figure 2 is located within the northern portion of the Milldale development and is not owned by FHLD. The lot is approximately 12.3 ha in size, is uniform in shape, and sits with the boundaries adjacent to future lots 11, 12 and 13. The site, situated within the same live urban zoned area as Milldale, consists of rural living lifestyle block with the rural pasture and some scattered vegetation mainly around the boundary of the site. As set out in Section 3.0 below, the design of Stages 10 – 13 has given consideration to 147 Argent Lane, and how the proposal integrates with this land and does not restrict it from development in the future in accordance with the Wainui Precinct Plan.

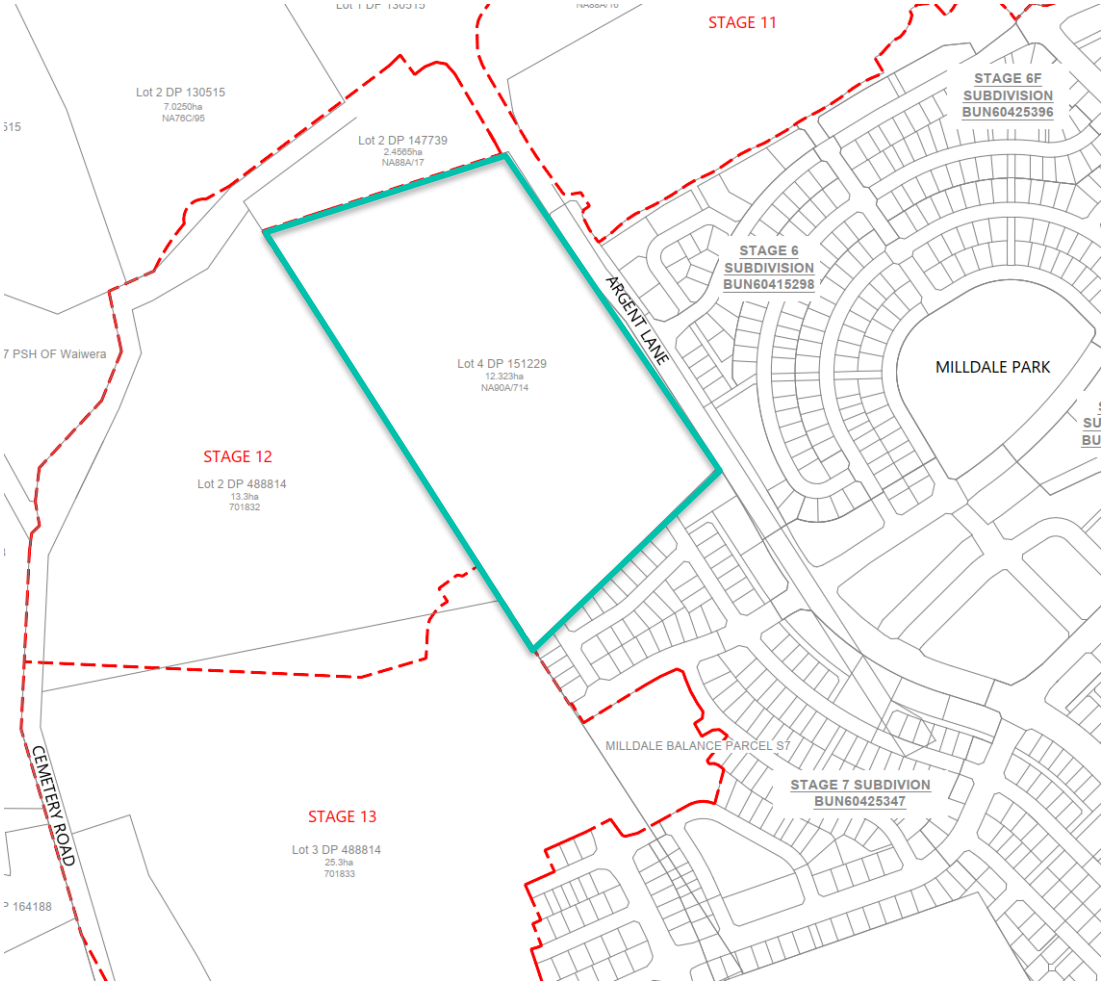

Figure 2: 147 Argent Lane Location

2.4 Zoning & Wainui Precinct Plan Elements

Under the AUP(OP), the Site falls under a mixture of zoning including Residential – Single House, Mixed Housing Suburban, and Mixed Housing Urban zone, with Open Space – Conservation zone along the Waterloo Creek and Stream 21 (as identified in the Ecology Reporting, hereon referred to as '**Milldale Stream**'). Small pockets of Business – Neighbourhood Centre zone are dotted throughout the Site adjacent to the Open Space zones.

The Site contains several indicative elements on the Wainui Precinct Plan, including:

- An indicative northern collector road connecting Parish Drive and the Cemetery Road Link;
- An indicative east-west collector road link continuing through from Milldale Drive to Cemetery Road;
- An indicative reserve edge road along the north/north-western side of Milldale Stream;
- Continuation of Argent Lane arterial road;
- Indicative neighbourhood park located in the north-eastern corner (Stage 10); and
- Indicative stream running east-west across the extent of Stages 10 through to 13.

2.5 Records of Title and Land Ownership

The Records of Title (**ROT**) of the Site and associated interests registered are provided in **Appendix 1A** of the Overview Report and summarised in **Table 1** below. There are no limitations on the ROT that restrict the proposed subdivision.

Table 1: Landholdings within the Stage 10 – 13 subdivision site

Stage	Area	Site Address	Legal Description	Owner
10	12.632 ha	131 Argent Lane	Lot 9006 DP 602895; Lot 4 DP 353309.	FHLD
11	12.7163 ha	131 Argent Lane 168 Argent Lane	Lot 9006 DP 602895; Lot 1 DP 147739.	FHLD
12	18.1062 ha	167 Argent Lane 597 Wainui Road 107 Cemetery Road	Lot 2 DP 130515; Lot 2 DP 147739; Lot 2 DP 488814; Lot 3 DP 488814.	FHLD
13	27.0738 ha	107 Cemetery Road 131A Argent Lane	Lot 9007 DP 602895; Lot 1 DP 488814; Lot 2 DP 488814; Lot 3 DP 488814.	FHLD

2.6 Land Use and Roading

The site is irregularly shaped and slopes down from the external perimeter of the project boundary towards the inner boundary adjacent to previously approved Stages 6 and 7. The site is bound by Wainui Road to the north, Lysnar Road to the north-east and Cemetery Rd to the west. Previously consented Milldale stages are located to the south of the Site including Stages 5 – 9 and the Milldale Town Centre.

Lysnar Road is currently a 5m wide gravel carriageway with one traffic lane in each direction. On 9th December 2024, Auckland Transport's (**AT**) Notice of Requirement 10 (**NoR10**) was confirmed relating to a designation over that part of the road on the corner of Wainui Road and Lysnar Road. The proposed extent of works sits out with this area.

The portion of Argent Lane to be upgraded contains a 6m wide carriageway with one traffic lane in each direction and is currently a dead-end road. This is a rural road with no signs or road markings. Argent Lane currently connects to Wainui Road at an existing t-intersection to the north and terminates approximately 900m to the south. The road contains an unformed berm, unsealed shoulders along each edge, no footpaths, pedestrian facilities, dedicated cycle lanes or formal bus services. Argent Lane is identified in the Wainui Precinct Plan as the main arterial route to the town centre, and along with Wainui Road, provides the main route of access between the development and the wider surrounding road network. Consents have already been granted to upgrade the Argent Lane/Wainui Rd intersection to a roundabout and to stop the road as per **Figure 3**Error! Reference source not found. below.

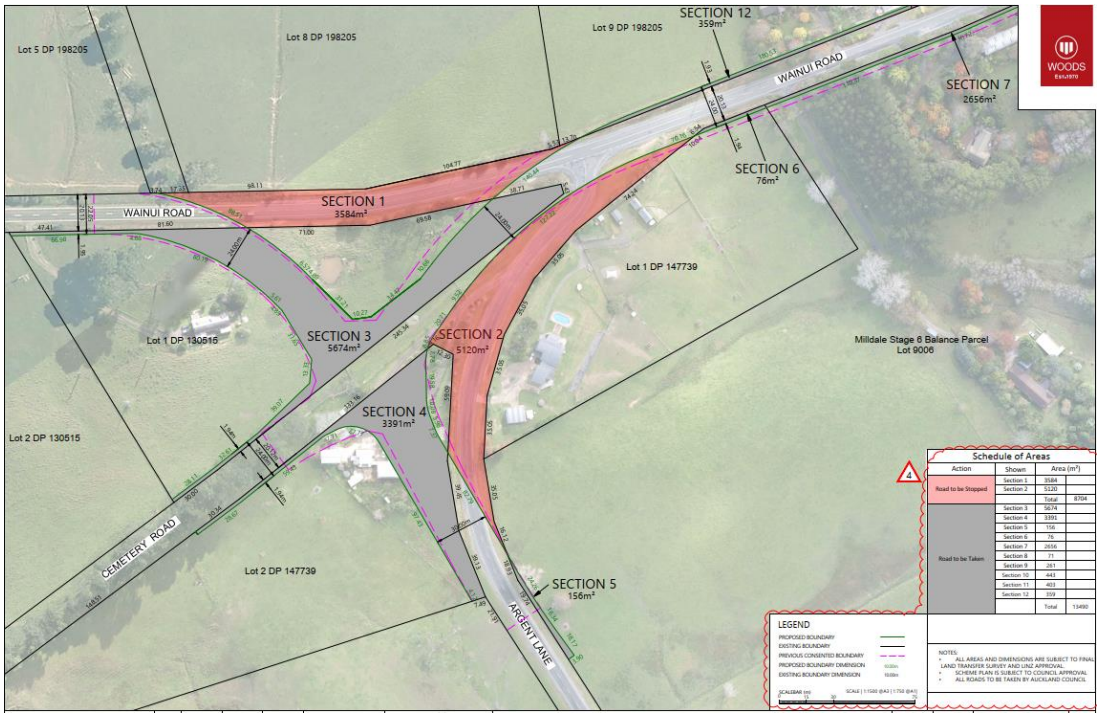

Figure 3: Approved LUC60393114-A - Upgrade of Argent Lane

2.7 Geology and Topography

A Geotechnical Investigation Report (**GIR**) of the Site has been prepared by CMW Geosciences (**CMW**) and is provided in **Appendix 2A**. The GIR confirms that Stages 10 & 11 occupy the gently sloping southern flank of the Wainui Road ridge, between Lysnar Road and Argent Lane. Stages 12 & 13 occupy the moderate slopes to the east of Cemetery Road, extending as far as Argent Lane in the north, but excluding the low-lying parcel of land at 147 Argent Lane. Published geological maps for the area depict the regional geology as comprising Hukerenui Mudstone of the Mangakahia Complex of the Northland Allochthon and Tauranga Group Alluvium.

Hukerenui Mudstone within the slopes and elevated portions of the site, Tauranga Group Alluvium/ Colluvium within low—lying areas around the streams and Mahurangi Limestone in low lying areas west of Argent Lane have been identified by CMW. These geological units present potential geohazards from landslips, load-induced settlement and liquefaction (if sandy lenses are present). These potential hazards have been taken into consideration in the proposed earthworks across the site.

Stage 10 -13 is situated on the most difficult terrain within the Wainui Precinct. The existing topography is considered steep within the context of the wider development. The site also includes several existing watercourses with steep terrain on the surrounding adjacent land to these watercourses.

The site has a low level of 12m RL at the lower extents of the Milldale Stream towards Lysnar Road, and a high level of 82m RL at the western extents along Cemetery Road.

The lower levels of the site are generally set by Stream 21, which is the main stream extending from Lysnar Road, along the southern edge of Stages 10 & 11, then through into the eastern area of Stages 12 & 13. The higher levels are set by the ridgeline roads of Wainui Road and Cemetery Road.

2.8 Groundwater

The CMW GIR has addressed groundwater levels across the site. The investigation was undertaken in November-December 2024 at depths ranging from 15m to 19.5m, and found that groundwater was not encountered in any of the boreholes taken across the site.

Groundwater monitoring was undertaken by CMW. Groundwater was monitored between 2.3 to 2.4m below ground level. The depth of groundwater is expected to vary due to topography and seasonal changes.

2.9 Vegetation

An arboricultural report has been prepared by Arbolab and is provided in **Appendix 2B** which identifies tree and other vegetation within the Stages 10-13 works area. The assessment has been undertaken through a Visual Tree Assessment (**VTA**) consistent with modern arboricultural practices.

The survey identified a total of 747 trees within the extent of the site. The majority of the trees are located either within existing road reserves, land zoned as Open Space – Conservation with a small number located within private land holdings. The trees identified are a majority of exotic species with 68 native trees identified.

2.10 Ecology

An Ecological Impact Assessment (**EIA**) has been prepared by Viridis and is provided in **Appendix 2C**. The report has been prepared to assess ecological values and effects associated with the proposal. The key ecological features of the site are shown in **Figure 4** and summarised below.

Figure 4: Freshwater Features within Stages 10-13 Site Extent

2.10.1 Terrestrial Ecology

2.10.1.1 Terrestrial Vegetation

The majority of the site is in pasture for grazing purposes. Vegetative cover is limited, except for the eastern part of Stage 11, which featured a significantly higher density of trees (stand of pine trees) compared to the rest of the site. Elsewhere, tree vegetation was largely confined to scattered exotic trees along riparian areas, isolated shelterbelts, and individual paddock trees.

Riparian vegetation was generally sparse. A relatively small riparian area along Milldale Stream (ID Stream 21) located in Stage 11, contained denser vegetation comprising mixed native and exotic trees. Outside of these areas, riparian vegetation consisted only of sporadic exotic trees and occasional natives. Overall, botanical and ecological value of the site was considered to be low.

2.10.1.2 Birds, Bats and Lizards

The ecological value of the site for birds was considered to be low due to the limited bird habitat and limited suitable roosting and foraging sites within the site.

The ecological value of the site for lizards was considered to be moderate due to the potential presence of copper skink. With the exception of the weedy scrub along the riparian margins of the Fitzgerald Stream and Hingaia Stream tributaries and exotic garden and amenity plantings, there is little suitable habitat for lizards within the site.

The ecological values of the site for bats were considered to be moderate due to the presence of potential habitat for bats, and despite reasonable efforts for survey efforts in recent years, bat presence cannot be ruled out.

2.10.2 Freshwater Ecology

2.10.2.3 Watercourses

The site contains one permanent stream identified as Milldale Stream which begins downstream of Stage 12 and flows through the site along the southern boundary of Stages 11 and 10 in an easterly direction. The stream has been surveyed and confirmed within the Stream Width Assessment prepared by Woods in **Appendix 2D**. The stream is a tributary to the Waterloo Creek. Milldale Stream is highly degraded due to the modified agricultural land use with limited riparian vegetation. Due to its degraded and modified nature, poor water quality and likely presence of only common pollutant tolerant fish, Milldale Stream has been assessed to have a low ecological value.

Several watercourses within the Site have been identified as intermittent streams (Watercourse 2-3, 5-9, 12, 15, 17-20, 25-27, 35-36, 42-43). These streams flow to Milldale Stream and are a part of the Waterloo Creek catchment. The intermittent streams within the site were considered to be of low ecological value across the site, due to their highly modified nature, general lack of riparian vegetation to provide filtration and shading functions, and lack of suitable aquatic habitat.

2.10.2.4 Wetlands

The site contains 16 wetlands identified within **Figure 4** above. The wetlands range in size from 73m² (Wetland G) to 6,892m² (Wetland N). The wetlands contain very similar species composition. Despite wetland hydrology not being present in these areas, as confirmed within the Hydrology

Assessment Report prepared by WWLA in **Appendix 2E**, they contained >50% facultative wetland species coverage and therefore met the rapid test for wetland presence.

The ecological value of all identified wetlands was considered to be low, due to their degraded nature, relatively small size, lack of indigenous flora biodiversity, general lack of structural tiers which limited habitat availability, and negligible aquatic habitat.

2.10.2.5 Artificial Pond and Drainage Channels

The site contains artificial watercourses constructed for farm drainage purposes. Their classification as drains is based on their alignment with natural topography, absence of a historic natural channel, catchment size, and artificial characteristics such as deepening and straightening. None of the drains contain permanent flows and their ecological value is considered to be negligible. The National Environmental Standards for Freshwater (**NES-FM**) and AUP(OP) does not protect these constructed waterbodies.

2.10.3 Offset Site Context

The wetland offset site is located to the north of Wainui Road at 173 and 231 Upper Orewa Road, Upper Orewa (**Figure 5** below). This site comprises a total land area of approximately 28.6ha, and is located in the Rural Production zone. There are no dwellings on the site and is currently used for grazing cattle. The offset site includes gently sloping hillsides where the elevation drops from approximately 43m to 19m above mean sea level with a varying average slope.

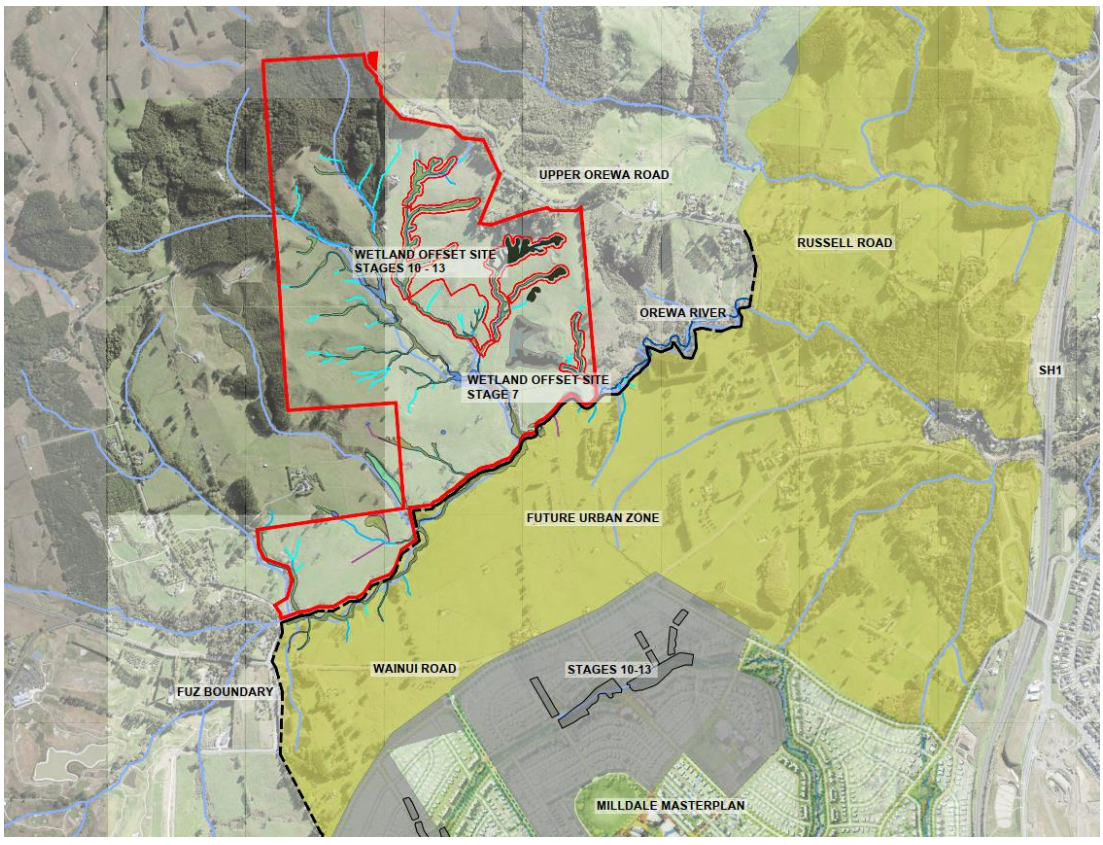

Figure 5: Offset Site at 173 and 231 Upper Orewa Road

The offset site is located in the same wider catchment as the impact site (Ōrewa river catchment). As part of the Milldale Stage 9 resource consent process, wetland offset planting is proposed on other parts of the offset site resulting in restoration and enhancement an area of 1.77 ha.

As detailed in the EIA (**Appendix 2C**) the current ecological value of the offset site streams and wetlands is low. Similar to the impact site streams and wetlands, the existing offset streams and wetland have been highly modified through agricultural practices, there is a lack of structural tiers, a very high dominance of exotic species, and lack of aquatic habitat. Historical agricultural practices severely impacted this wetland through pugging and grazing. The plant species are similar in composition as the impact site (including but not limited to creeping buttercup and creeping bent amongst listed pasture species) and are all in close proximity.

2.11 Existing Infrastructure

The Infrastructure Report prepared by Woods included in **Appendix 2F** confirms that there is no stormwater, water supply or wastewater reticulation within the project area. However, there is existing water supply, stormwater and wastewater infrastructure surrounding the project area as a result of the extensive development within Milldale Stages 1-9 to date which has been designed to be extended into Stages 10-13. The development within the wider Milldale area has been master planned to extend into the project area to cater for the proposed development.

2.11.1 Wastewater

Milldale is part of a master planned wastewater catchment. Stages 10 to 13 are situated within the broader framework identified as the Waterloo Wastewater catchment.

The Waterloo Wastewater catchment accumulates at the lower reaches of the catchment into an existing wastewater transmission line. This transmission line then extends through to Wainui Road, where it discharges to the Milldale Wastewater Tunnel built by FHLD in an earlier stage of the Milldale development. This tunnel then conveys wastewater flows through to the Orewa West Pump Station, and then onto the Army Bay Wastewater Treatment Plant. The potential capacity constraints at the Army Bay Treatment Plant has required FHLD to seek consent for a temporary on-site wastewater treatment plant (**WWTP**) in case it is required[1]. Details of that aspect of the application are addressed in **Volume 4**.

The existing wastewater infrastructure will be available at the downstream extents of Stage 10 and Stage 13. These connections will be utilised to serve all of the proposed development for wastewater flows via new gravity networks.

2.11.2 Stormwater

There is stormwater infrastructure and several watercourses which Stages 10 to 13 discharge into Waterloo Creek that runs from south to north and is located to the east of stage 10. All watercourse and contributing stormwater infrastructure within Stages 10 to 13 will ultimately discharge to the Waterloo Creek.

The Milldale Stream (previously referred to as Watercourse P9 in preceding assessments), is an existing stream that discharges to Waterloo Creek.

[1] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Wastewater and Water Reticulation

An existing culvert is present on the Milldale Stream at the Argent Lane crossing. This culvert is currently undersized for passing flood flows. It has been consented for being upgraded to a 6m wide inverted 'U' culvert as part of Milldale Stage 6 (Council reference BUN60415298 - LUS60419819).

Several other existing farm culverts of varying sizes are located across the site. These existing culverts are defined on the streamworks plans P24-128-00-1400-EW to 1403. These existing farm culverts will be removed as part of the proposed streamworks; and

Proposed public stormwater infrastructure is planned for construction on adjacent consented stages of Milldale. In particular Stage 7, Stage 8 and the Wainui Road / Argent Lane upgrade consents will have stormwater reticulation that will have overlapping and connecting stormwater catchments with Stages 10 – 13.

It is noted there is a Wainui East specific Stormwater Management Plan (**SMP**), and that the Network Discharge Consent (**NDC**) covering the Precinct has been amalgamated into the Auckland-wide NDC. This is further elaborated on in Section 4.2 of the Infrastructure Design Report at **Appendix 2F**.

2.11.3 Water Supply

Existing water supply infrastructure for Milldale has been constructed in Stage 1, Stage 2, Stage 3, Stage 4, Stage 5, parts of Stage 6 (the remainder of Stage 6 is currently under construction) and as part of the water supply trunk infrastructure for the wider catchment. This infrastructure is sized to supply potable water including for the water demands from within Stages 10 to 13.

The existing water reticulation in Stages 5-9 will be extended into Stages 10 to 13 to provide water supply connections.

2.11.4 Electricity

Stages 10 to 13 will be supplied by extending power reticulation laid with Stages 5-9 civil works. Any reticulation extension or upgrades required for the development of Stages 10 to 13 will be undertaken following reticulation design by Vector.

2.11.5 Telecommunications

Stages 10 to 13 will be supplied by extending telecommunications reticulation laid within Stages 5-9civil works. Any reticulation extension or upgrades required for the development of Stages 10 to 13 will be undertaken following reticulation design by Tuatahi First Fibre.

2.12 Flooding

A Stormwater Assessment Report has been prepared by Woods and is included in **Appendix 2G**. The stormwater assessment is conservative as the model parameters assume maximum probable development (**MPD**).

Stages 10-11 are located within the Stormwater Management Zone C of the Wainui East Stormwater Management Plan, and Stages 12-13 and located within Zone D. As the site is located within a Stormwater Management Area – Flow 1, retention and detention of stormwater flows must be taken into account through the proposed development.

2.13 Contamination

A Detailed Site Investigation (**DSI**), and a Site Management and Remedial Action Plan (**SMRAP**) have been prepared by Groundwater and Environmental Services (**GES**) and included in **Appendix 2H and 2I** to assess whether Hazardous Activities and Industries List (**HAIL**) activities have occurred on the site, and to determine any consenting requirements in the Stages 10-13 subdivision area.

The DSI concludes that the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (**NES-CS**) could be relevant to the proposal due to the presence of identified contamination within the site. Soil samples and samples of potential Asbestos Containing Material (**ACM**) were collected from areas of concern and analysed for potential contaminants. Arsenic contamination above NES-CS residential guidelines was identified at two locations, namely:

- The west side of the farm shed south of the dwelling at 107 Cemetery Road; and
- In the former stockyard at 167 Argent Lane.

Zinc contamination above permitted activity criteria for environmental protection was found at two locations:

- The west side of the farm shed south of the dwelling at 107 Cemetery Road; and
- South-east corner of the hay shed in the north-west of Lot 3 DP 488814.

Remediation is recommended for contamination at levels above the NES-CS residential guideline values and permitted activity criteria for environmental protection.

2.14 Heritage and Archaeology

Clough and Associates have previously completed two Archaeological Assessments for the wider Wainui Precinct. An addendum has been prepared for the balance of the Milldale site by Clough and Associates dated January 2024 (**Appendix 2J**) which includes the Stages 10-13 area. Heritage and archaeology matters are addressed in Volume 5 of the AEE.

3.0 Proposal

3.1 Overview

This section of the application is a summary of the key elements of the proposal provided in accordance with clause 2(1)(a) of Schedule 4 of the FTAA.

This application is seeking approval for land use and subdivision resource consent to authorise the Milldale Stages 10 – 13 subdivision and bulk earthworks. Specifically, the application seeks approval to undertake the following:

- Subdivision Stages 10 – 13 to create 623 vacant residential lots, 27 residential super lots, one neighbourhood centre lot, two neighbourhood parks (land in lieu of reserve), 21 local purpose (drainage) reserves and supporting roading and pedestrian network in accordance with the AUP(OP), including the Wainui Precinct Plan;
- Resolution of split zoned sites through blanket consents and consent notices that apply a consistent set of land use standards to the affected sites;
- Completion of roading throughout the Site;
- Construction of five pedestrian bridges and 11 culverts;
- Approximately 734,100m³ of cut and 950,000m³ of fill earthworks over an area of 68 ha to facilitate building platforms, roading networks, infrastructure services and utilities, and stormwater management devices;
- Contamination remediation;
- Removal of an archaeological feature (refer to Volume 5 of the AEE for further information);
- Diversion of approximately 1,134m of intermittent stream length;
- Partial reclamation of approximately 1,028m (402.3m²) of intermittent stream extent;
- Reclamation of 16 wetlands totalling an area of 2.02 ha;
- Removal of vegetation in the road reserve, open space zone and riparian margins;
- Revegetation of riparian margins and within the streetscape; and
- Groundwater drawdown.

The proposal is detailed in the application drawings (**Appendix 2K**). The Stages 10-13 subdivision is illustrated in **Figure 6** below.

For completeness, approval is sought under s42(4) of the FTAA for a resource consent that would otherwise be applied for under the Resource Management Act 1991.

3.2 Subdivision Layout and Design

This section of the application and the subdivision scheme plans prepared by Woods included in **Appendix 2K** is provided in accordance with clause 8(1) of Schedule 5 of the FTAA in respect of the proposed subdivision of the Site.

3.2.1 Urban Design Overview

The overall design rationale for the Stages 10 – 13 subdivision is to create a high amenity residential development that responds positively to on-site features and provides good connections to the wider open space network. The design is underpinned by principles of connectivity and movement, urban form and amenity. The design vision and principles are discussed further in the Urban Design Report included in **Appendix 2L** and can be summarised as follows:

- Deliver a diverse and flexible housing mix that addresses market demand, incorporates various housing typologies, and accommodates future development while respecting site constraints such as topography and stormwater management;
- Ensure design cohesiveness through the integration of Milldale development characteristics, creating a unified identity, diverse block sizes, and efficient connectivity for both vehicles and pedestrians; and
- Enhance environmental sustainability by incorporating greenways, open spaces, and stormwater management solutions that promote connectivity, recreational opportunities, and long-term development adaptability.

3.2.2 Subdivision Overview

As detailed on the scheme plans in **Appendix 2K**, the proposal involves the creation of the following lots in accordance with the Wainui Precinct Plan in the AUP(OP):

- 623 vacant residential lots;
- 27 residential superlots (with capacity to accommodate approximately 296 dwellings) and one commercial superlot;
- 2 land in lieu lots to be utilised for Neighbourhood Parks;
- 21 local purpose (drainage) reserves; and
- Lots containing the associated roading and pedestrian network.

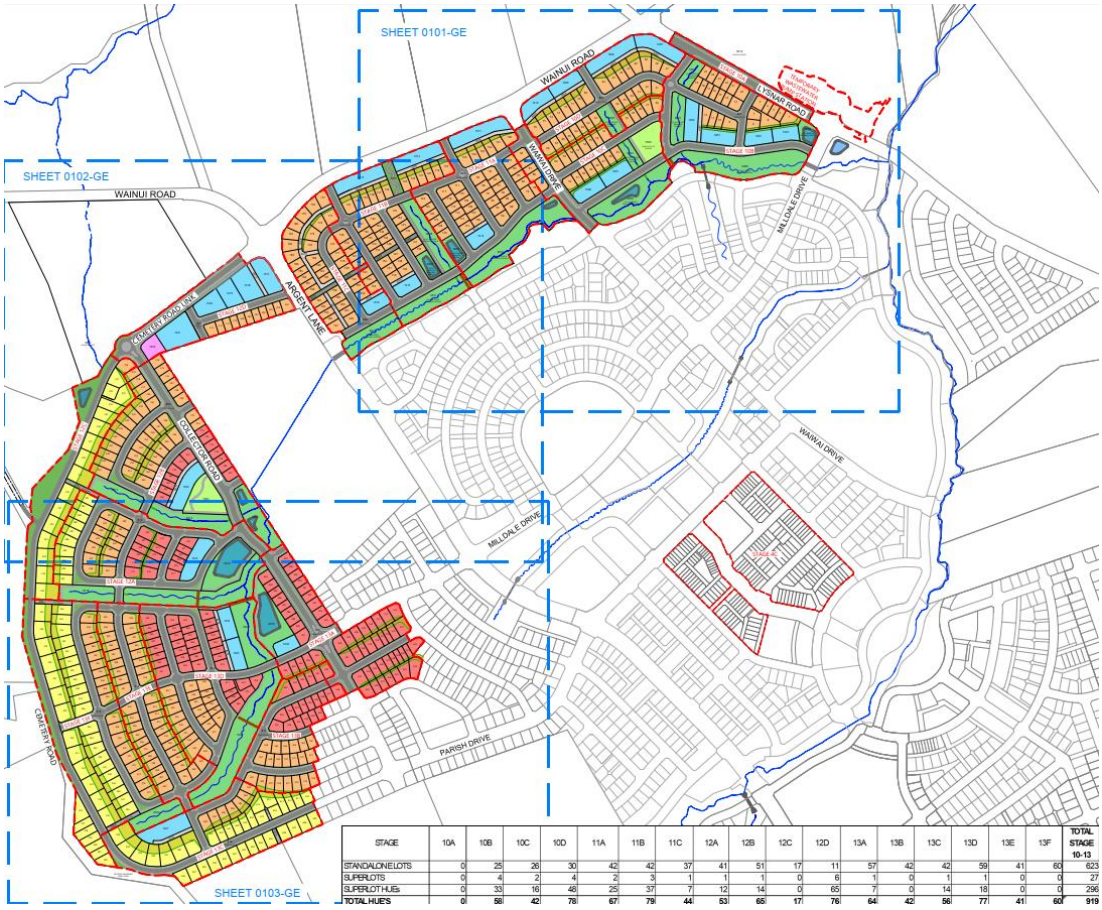

Figure 6: Overall Development Control Plan

The proposed lots to be created through each stage are identified on the scheme plan and are summarised in Table 2 below. The following sections below provide an overview of the types of lots to be created through the subdivision.

Table 2: Lots to be created through the Civil Works Subdivision Phase

Stage	Lot Type	Lot Numbers
10	Residential Freehold	Lots 1-77, 80-83
	Superlots	Lots 1001-1010
	Land in Lieu of Reserve	Lot 7000
	Local Purpose (Drainage Reserve)	Lots 6000-6004 & 6008-6009
	Joint Owned Access Lots	Lots 4001-4005
	Roads to Vest	Lots 801-803, 807-808
11	Residential Freehold	Lots 78-79, 84-202
	Superlots	Lots 1011-1016
	Local Purpose (Drainage Reserve)	Lots 6005-6006 & 6010-6012
	Pedestrian Access Lot	Lots 3001-3005
	Joint Owned Access Lots	Lots 4006-4014

	Roads to Vest	Lots 804-806
12	Residential Freehold	Lots 203-322
	Commercial Superlot	Lot 1050
	Superlots	Lots 1017-1023
	Land in Lieu of Reserve	Lot 7002
	Local Purpose (Drainage Reserve)	Lots 6013-6018
	Pedestrian Access Lot	Lot 3006
	Joint Owned Access Lots	Lots 4015 & 4017
	Roads to Vest	Lots 807-810, 818, 821-824
13	Residential Freehold	Lots 323-623
	Superlots	Lots 1024-1027
	Local Purpose (Drainage Reserve)	Lots 6019-6022
	Pedestrian Access Lot	Lots 3007-3009
	Joint Owned Access Lots	Lots 4018-4021
	Roads to Vest	Lots 811-816 & 819-820

3.2.2.1 Residential Freehold Lots

The site contains three residential zones, being Single House Zone (SHZ), Mixed Housing Suburban (MHS) and Mixed Housing Urban (MHU). Table 3 below outlines the minimum net size areas and the minimum and maximum average lot sizes proposed for each zone across the proposed 10-13 stages.

Table 3: Proposed lot sizes across Stages 10-13

Zoning	Minimum Lot Size	Maximum Lot Size	Average Lot Size
Single House Zone	484m²	1,320m²	777m²
Mixed Housing Suburban	270m²	912m²	483m²
Mixed Housing urban	263m²	1,008m²	437m²

The size and orientation of the lots have been designed to accommodate a future building envelope compliant with the associated AUP(OP) bulk and location standards, ensuring appropriate levels of on-site amenity. For lot testing on selected lots, refer to the standalone lot testing in the Urban Design Report in Appendix 2L. The indicative site plans for selected residential lots are not a final representation of the built form and are not intended for consent approval.

To facilitate level building platforms created through the proposed earthworks (refer below), land covenants will be placed on a number of the lots to accommodate maintenance of vegetated earth batters and retaining walls. The relevant lots are identified on the Scheme Plans included within Appendix 2K.

Residential lots that have a split zoning under the AUP(OP) are discussed in Section 3.2.2.4 below.

3.2.2.2 Residential Superlots

General Superlots

The proposal includes the establishment of 27 residential super lots (Lots 1001-1027) that have capacity to accommodate approximately 296 dwellings. They range in size from 1,153m² to 3,380m². The superlots are strategically located adjacent either to the planted riparian corridors on Streams 2 and Milldale Stream, or along Wainui Road and Cemetery Road Link roads where public transport is proposed.

The superlots diversify housing choices, enhance density around amenity areas, and ensure comprehensive design outcomes are achieved in higher intensity locations with access to public transport options. For those superlots located within the MHS and MHU zones, the superlot testing contained in the Urban Design Report (**Appendix 2L**) confirms future development can comply with the standards of those zones and can achieve an efficient and high amenity layout.

The indicative site plans on individual residential super lots are for lot testing purposes only and are indicative for the purposes of this consent. They do not represent a full and final representation of the built form typology that could be achieved on each lot and are not for the purposes of resource consent approval. Development on these lots will be subject to a future resource consent process under the MHS and MHU zones.

Single House Zone Superlots

With regards to Lots 1007-1013, 1017-1021 and 1027, the underlying zoning is SHZ. The SHZ was applied to the edges of the Milldale development, adjacent to the Future Urban zone, to create a transition between higher-density development within the central area and the rural land beyond. However, with structure planning advancing north of Milldale and a Plan Change lodged to urbanise Milldale North, maintaining low-density housing as a transition on the northern edge is no longer appropriate or necessary given the anticipated development further north of the site in the future. Given this context, development to a MHU density is proposed in order to better integrate with future development planned for Milldale North[2] and ensure that remaining land in Milldale is used efficiently.

The SHZ superlots have been strategically positioned where development to a MHU density development is considered appropriate. There are three distinct areas that have been considered;

- **Wainui Road**

  Superlots 1007-1013 are located along Wainui Road. Wainui Road is a designated arterial road with an approved consent for an upgrade to a collector road standard. This upgrade includes a 24-meter-wide corridor featuring a bi-directional cycle path along the southern edge and provisions for bus stops along its entire length. As a key transport link, the upgraded road will offer strong connectivity to active mode infrastructure and public transport. Medium-density residential development along this corridor is considered more appropriate than single-story, detached dwellings typically expected in the Single House Zone, as it better complements the scale and function of Wainui Road as designed as a collector road. Additionally, the proposed

[2] Refer to the Overview Report for further information on the Milldale North development and Council's proposed zoning of the site through PC78 to the AUP(OP).

density aligns well with a rear-access JOAL layout, optimizing site efficiency and urban design outcomes.

- Argent Lane/Cemetery Road Link

  Superlots 1017-1021 are strategically located within close proximity to the proposed NCZ superlot (discussed further in 3.2.2.3 below) at the corner of Argent Lane and Cemetery Road Link. Positioned within Stage 12, the NCZ superlot, as discussed within the Economic Report in Appendix 2M, is intended to serve the day-to-day needs of future residents and has been carefully sited to ensure sufficient foot traffic for long-term viability. Co-locating higher-density development alongside the NCZ lot provides a critical residential catchment to support its activity. The adjacent portion of Cemetery Road Link is a collector road, designed with a 24-meter-wide corridor, 3.5-meter-wide traffic lanes, a two-way cycle path along the southern side, and designated areas for bus stops and shelters. Given the proximity to the NCZ lot, along with strong access to active mode infrastructure and public transport, medium-density residential development in this area is considered both appropriate and well-integrated within the wider urban framework.

- Stage 13 stream edge

  Superlot 1027 is located in the southeastern corner of Stage 13, directly adjacent to a local-purpose drainage reserve. The superlot sits below a landscaped RE slope at a lower elevation than the SHZ lots above, creating a tiered relationship between the different land uses. The lot is rear loaded via a JOAL along the southern boundary, providing access and servicing. This configuration encourages the orientation of future development toward the local-purpose reserve, maximising opportunities for passive surveillance and enhancing visual and recreational amenity for future residents.

  Furthermore, the lot's position below the landscaped RE slope plays a key role in integrating future medium-density development into the natural setting. The slope serves as a backdrop, allowing the built form to be absorbed into the landscape and minimising its visual prominence. Given these factors, medium-density development is considered highly appropriate in this location, as it would achieve a high degree of subtlety and cohesion when viewed within the context of the surrounding environment.

In order to provide certainty for the decision-making authority, and future owners/developers of the proposed lots, blanket resource consents are sought that apply the development standards as set out within the Residential Design Outcomes and Controls Document (RDOC) within Appendix 1 of the Urban Design Report (Appendix 2L). The RDOC provisions will be imposed as a land use consent condition and a consent notice on these superlot titles. The provisions included within the RDOC have been based on the design standards and outcomes sought within the MHU zone under the AUP(OP).

This Application has resolved the implementation of the RDOC as follows:

- Approval under the AUP(OP) provisions for:
  - Blanket land use consent (and associated consent notice to be placed on each superlot) for a non-complying activity for more than one dwelling per site; and
  - Infringements to SHZ standards where these are inconsistent with the standards sought within the Design Outcomes and Controls document.

- Imposition of consent notices on the ROTs for the superlots requiring development to be in accordance with the RDOC[3].
- Clarity through the consent notices that should a future landowner/developer wish to deviate from the built form controls or the maximum residential yield on any lot, an application for a discretionary activity to vary a consent notice under Section 221 of the RMA will be required.
- Clarity through the consent notices that approval has not been granted for subdivision of the superlots, and that consent will still be required under the AUP(OP) E38 standards for subdivision around approved land use.

The RDOC will be implemented through the future development of the superlots as follows:

(1) Design Outcomes

This section is intended to inform a well-built urban environment rather than dictate the exact design, style and layout for each superlot. This section of the RDOC sets out the evaluative framework for future development on the superlots to be assessed against.

The intent of the matters set out in the Design Outcomes is to enable flexibility in design whilst encouraging diversity of design solutions that ensures a consistent quality of built form is achieved.

(2) Design Controls

The Design Controls establish mandatory development standards for the superlots that development must be in general accordance with. By setting clear standards, particularly for elements that impact streetscape and visual amenity, the standards ensure that the superlots can accommodate the anticipated density while maintaining a cohesive neighbourhood character.

These design controls include anticipated yields for each superlot, as informed by superlot testing undertaken. The yield anticipated on each lot provides certainty that future development can comply with the requirements of the design controls.

(3) Implementation of Design Endorsement

Prior to the application for building consent, all designs on the superlots must be reviewed and endorsed by the Auckland Council Urban Design Team Leader to confirm that the design is in accordance with the RDOC. Endorsement must be within 20 working days of submission.

Open Space Conservation Zone Superlots

Superlots 1001, 1002, 1003, 1006, 1024 and 1025 are either partially or wholly within the Open Space – Conservation zone and are surplus to Auckland Council Parks requirements as recreation reserves. The lots have a proposed area of 1,430m², 1,473m², 1,875m², 1,709m², 1,464m² and 1,514m² respectively and are included in the total number of residential superlots proposed.

Neighbourhood Centre Zone Superlot

Superlot 1026 is partially within the Business - Neighbourhood Centre Zone (NCZ). However, as discussed further in Section 3.2.2.3 below, the Economic report included in Appendix 2M supports

[3] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Consent Notices

moving this superlot further north within Stage 12 adjacent to Cemetery Road. A blanket land use consent is sought for infringement to the development standards in the Neighbourhood Centre zone to allow for residential development on Lot 1026 in line with the MHU zone. This is addressed in Section 3.2.2.4. A consent notice is also proposed to enable residential future development and that the NC zone standards do not apply[4].

3.2.2.3 Neighbourhood Centre Zoning and Superlot 1050

As part of the original Wainui East master planning and zoning exercise, the Neighbourhood Centre zone comprising 0.749 hectares was established at the western extent of the Precinct. Dwellings are permitted within the Neighbourhood Centre zone and the Neighbourhood Centre zone standards are more permissive than the MHU zone standards.

As detailed in the Economic Report prepared by Insight Economics (**Appendix 2M**), the size of the Local Centre zone and Neighbourhood Centre zone within Milldale far outweighs and exceeds any likely future demand by future households. Due to the oversupply of commercially zoned land within the Milldale development, and due to Stages 10-13's proximity to the Local Centre, the area allocated to Business - Neighbourhood Centre zone activities has been reduced and re-located to the northern portion of Stage 12 near the intersection of Cemetery Road and Argent Lane. The proposed commercial superlot (Lot 1050) is proposed to have an area of 1,289m² with capacity to accommodate approximately 855m^2 of commercial floorspace. Whilst this is a reduction from the zoned land of 7,520m², Insight Economics justifies the reduction by comparing the amount of NCZ land zoned per 1,000 households to find that the anticipated 7,520m² is twice the regional norm. Consequently, the zoned centre land provision is far higher than any likely future requirements. The proposed area of 1,289m² is considered to be appropriately scaled to meet the likely demand, and avoids potentially oversizing centres in low demand settings resulting in long-term vacancies or underuse. This also frees up underutilised land for other potentially high value uses as needed. With regards to the current NCZ land in Stage 13, Lots 6019 and 6020 will be utilised for Local Purpose (Drainage) reserves and riparian planting, whilst Lot 1026 is proposed to be developed for residential rather than commercial activities.

The Economic Report justifies the re-location of the Neighbourhood Centre zoned land within Stage 13 into the northern portion of Stage 12. The original location of the neighbourhood centre is too close to the large local centre to be economically viable. Conversely, the proposed location will help improve viability, increase the opportunity for passing trade, and ensure its long-term viability.

Superlot 1050 is considered a suitable site for future business development and is capable of containing a range of permitted activities that would be anticipated within the NCZ zone, such as retail, offices, residential, hospitality or an early childhood centre. From a transport perspective, Stantec concludes this change is not considered to be an issue as the neighbourhood centre would now be adjacent to a collector road and future bus route, enabling good accessibility by public transport (**Appendix 2N**). The neighbourhood centre would also be readily accessible by active modes through the dedicated cycle paths on both sides of the collector road and the footpaths provided on all the roads in the area.

The Urban Design Report (**Appendix 2L**) confirms future development potential for Superlot 1050 and that it can accommodate a range of commercial or residential development options. This

[4] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Consent Notices

assessment confirms that a land use outcome on this lot has not been predetermined, and will be subject to a separate resource consent approval process if development sought does not comply with permitted standards for the NCZ. The indicative site plan is for lot testing purposes only. It does not represent a full and final representation of the built form and is not for the purposes of resource consent approval.

3.2.2.4 Split Zoning of Residential Lots & Blanket Land Use Consents

As detailed on the zoning plan in **Appendix 2K** (P24-128-00-0003-GE), various residential lots are subject to split zoning, where future development will be subject to the requirements of multiple zones. Split zoning has occurred in previous Milldale consents (**Appendix 1F** within **Volume 1**) because the zoning for Milldale was undertaken at a high level, and the implementation of zoning based on the initial masterplan has resulted in a number of inconsistencies. The same rationale has been applied in this consent.

There are a number of sites that are not subject to split-zoning, but given the future development anticipated on the FUZ zoned land located north of Cemetery Road and Wainui Road, the transport network, block layout and block structure proposed, this application has sought isolated changes to the zoning to better reflect the built form outcomes sought. The Milldale zoning was established before urban development began, resulting in zone boundary anomalies that do not always align with lot boundaries. Blanket consents on these lots are proposed to apply the sought after zoning for development to occur.

As discussed within the Urban Design Report in **Appendix 2L**, the zoning pattern proposed has a gradual and even transition from SHZ to MHU. The pattern follows a radial block structure, and reinforces the stepping topography of the site by locating lower density sites along the "rural edge" of the development above RE Slopes to provide "buffers" to the higher density below. This gradual intensification in housing density, and specific re-allocation of zoning on isolated lots, creates a less fragmented built character across the proposed blocks, and is not considered to undermine the underlying zoning. Instead, it provides certainty for the applicant and future lot owners regarding development potential and relevant controls.

To address the split zoning and isolated zoning of some sites, the applicant is seeking blanket land use consents and associated consent notices relating to future residential development on the affected lots. Blanket land use consents for the respective sites involves the application of development standards for the predominant residential zone associated with each affected site. As the applicant currently owns all proposed lots, obtaining 'blanket' consent prior to the sale of individual lots will safeguard against potential difficulties for future developers and owners of the affected lots. The blanket land use consents sought are set out in **Table 4**.

Table 4: Blanket Land Use Consents for Split Zoned/General Proposed Change Lots

Lot Number	Blanket Land Use Consent Sought	Corresponding Consent Notice to be Applied[5]
40-44, 69-76, 101-105, 118-123, 136-138, 158, 172, 186-187, 191-192, 209-213, 215-216, 240, 242-248, 292-294, 302-305, 383-399, 570-573 & 580-582	Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Suburban zone standards on those parts of Lots 40-44, 69-76, 101-105, 118-123, 136-138, 158, 172, 186-187, 191-192, 209-213, 215-216, 240, 242-248, 292-294, 302-305, 383-399 & 570-573 that are split zoned Residential Single House Zone / Residential - Mixed Housing Suburban Zone. This requires consent as a discretionary activity pursuant to rule C1.7(1).	**Lots with Split Mixed Housing Suburban / Single House Zone (MHS Zone Standards Apply)** Lots 40-44, 69-76, 101-105, 118-123, 136-138, 158, 172, 186-187, 191-192, 209-213, 215-216, 240, 242-248, 292-294, 302-305, 383-399 & 570-573 contain split zoning of Residential - Mixed Housing Suburban and Single House zone. A blanket land use consent approval is provided to exclusively apply Mixed Housing Suburban zone standards to Lots 40-44, 69-76, 101-105, 118-123, 136-138, 158, 172, 186-187, 191-192, 209-213, 215-216, 240, 242-248, 292-294, 302-305, 383-399 & 570-573. All future development on these lots must be designed to adopt the Mixed Housing Suburban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Suburban zone standards.
1, 8, 1001-1003 & 1006	Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Suburban zone standards on those parts of Lots 1, 8, 1001-1003 & 1006 that are split zoned Residential - Mixed Housing Suburban Zone / Open Space – Conservation Zone. This requires consent as a discretionary activity pursuant to rule C1.7(1).	**Lots with Split Mixed Housing Suburban/ Open Space Zone (MHS Zone Standards Apply)** Lots 1001-1003, 1006 and Lots 1 and 8 contain split zoning of Residential – Mixed Housing Suburban and Open Space zone. A blanket land use consent approval is provided to enable dwellings and

[5] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Consent Notices

Lot Number	Blanket Land Use Consent Sought	Corresponding Consent Notice to be Applied[5]
		exclusively apply Mixed Housing Suburban standards to Lots 1001-1003, 1006, 1 and 8 to infringe the following development standards within the Open Space zone: (a) H7.11.1 Building height (b) H7.11.2 Height in relation to boundary (c) H7.11.3 Yards (d) H7.11.4 Screening (e) H7.11.5 Gross floor threshold (f) H7.11.6 Maximum site coverage; (g) H7.11.7 Maximum impervious area; and (h) Driveway crossings and parking areas. All future development on these lots must be designed to adopt the Mixed Housing Suburban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Suburban zone standards.
263-265 & 462	Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Suburban zone standards on those parts of Lot 263-265 & 462 that are split zoned Residential - Mixed Housing Suburban Zone / Residential – Mixed Housing Urban. This requires consent as a discretionary activity pursuant to rule C1.7(1).	**Lots with Split Mixed Housing Urban / Suburban Zone (MHS Zone Standards Apply)** Lots 263-265 and 462 contain split zoning of Residential - Mixed Housing Urban and Mixed Housing Suburban zone. A blanket land use consent approval is provided to exclusively apply Mixed Housing Suburban standards to Lots 263-265 and 462.

Lot Number	Blanket Land Use Consent Sought	Corresponding Consent Notice to be Applied[5]
		All future development on these lots must be designed to adopt the Mixed Housing Suburban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Suburban zone standards.
275, 306-309, 315-316, 424-430, 448, 468-470, 533-539 & 555-560	Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Urban zone standards on those parts of Lots 275, 306-309, 315-316, 424-430, 448, 468-470, 533-539 & 555-560 that are split zoned Residential - Mixed Housing Suburban Zone / Residential – Mixed Housing Urban. This requires consent as a discretionary activity pursuant to rule C1.7(1).	**Lots with Split Mixed Housing Urban / Suburban Zone (MHU Zone Standards Apply)** Lots 275, 306-309, 315-316, 424-430, 448, 468-470, 533-539 & 555-560 contain split zoning of Residential - Mixed Housing Urban and Mixed Housing Suburban zone. A blanket land use consent approval is provided to exclusively apply Mixed Housing Urban standards to Lots 275, 306-309, 315-316, 424-430, 448, 468-470, 533-539 & 555-560. All future development on these lots must be designed to adopt the Mixed Housing Urban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Urban zone standards.
281, 455-457, 478-479, 483-486 & 1025	Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Urban zone standards on those parts of Lots 281, 455-457, 478-479, 483-486 & 1025 that are split zoned Residential - Mixed Housing Urban Zone / Open Space – Conservation Zone. This requires consent as a discretionary activity pursuant to rule C1.7(1).	**Lots with Split Mixed Housing Urban / Open Space Zone (MHU Zone Standards Apply)** Lots 281, 455-457,478-479, 483-485 and 1025 contain split zoning of Residential - Mixed Housing Urban and Open Space zone. A blanket land use consent approval is provided to exclusively apply Mixed

Lot Number	Blanket Land Use Consent Sought	Corresponding Consent Notice to be Applied[5]
		Housing Urban standards to Lots 281, 455-457,478-479, 483-485 and 1025 and to infringe the following development standards within the Open Space zone: (a) H7.11.1 Building height (b) H7.11.2 Height in relation to boundary (c) H7.11.3 Yards (d) H7.11.4 Screening (e) H7.11.5 Gross floor threshold (f) H7.11.6 Maximum site coverage (noting blanket consent has been approved for 50% building coverage); (g) H7.11.7 Maximum impervious area; and (h) Driveway crossings and parking areas. All future development on these lots must be designed to adopt the Mixed Housing Urban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Urban zone standards.
1024, 1025, 281, 455-457 & 478-486	Blanket land use consent is sought to construct new buildings within the Open Space zone on Lots 1024, 1025, 281, 455-457, 478-486 that do not comply with one or more standards. This requires consent as a discretionary activity pursuant to rule H7.9.1(A38) and C1.9(2).	**Open Space Zone – MHU Zone Residential and Transport Activities (MHU Zone Standards Apply)** A blanket land use consent approval is provided to the following development standards within the Open

Lot Number	Blanket Land Use Consent Sought	Corresponding Consent Notice to be Applied[5]
	H7.11.1 – Height – to permit a maximum height of 11m; H7.1.2 – Yards – to permit front yard setback of 2.5m; H7.11.4 – Screening – to permit this rule to not apply; H7.11.5 – Gross Floor Area – To permit no GFA limit to apply; H7.11.6 – Site Coverage – to permit 50% site coverage; and H7.11.7 – Max Impervious coverage – to permit impervious coverage of 60%.	Space zone for Lots 1024 and 480-482: (a) H7.11.1 Building height; (b) H7.11.2 Height in relation to boundary; (c) H7.11.3 Yards; (d) H7.11.4 Screening; (e) H7.11.5 Gross floor threshold; (f) H7.11.6 Maximum site coverage (noting blanket consent has been approved for 50% building coverage); (g) H7.11.7 Maximum impervious area; and (h) Driveway crossings and parking areas. All future residential development on these lots must be designed to implement the Mixed Housing Urban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Urban zone standards.
1026 and 486-492	Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Urban zone standards on those parts of Lots 1026 and 486-492 that are split zoned Residential - Mixed Housing Urban Zone / Business – Neighbourhood Centre Zone. This requires consent as a discretionary activity pursuant to rule C1.7(1).	**Lots with Split Neighbourhood Centre/ Residential Mixed Housing Urban Zone (MHU Zone Standards Apply)** Lots 1026 and 486-492 contain split zoning of Residential - Mixed Housing Urban / Business - Neighbourhood Centre (NC) zone. A blanket land use consent approval is provided to exclusively apply Mixed Housing Urban

Lot Number	Blanket Land Use Consent Sought	Corresponding Consent Notice to be Applied[5]
		standards to Lots 1026 and 486-492. The approval enables: (a) Construction of new residential buildings within the Business – NC zone; (b) Residential dwellings at ground floor; and (c) Infringements to NC zone side and rear yards. All future residential development on these lots must be designed to implement the Mixed Housing Urban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Urban zone standards. The NC zone standards do not apply.
1026, 486-492	Blanket consent is sought to construct dwellings / buildings on Lots 1026, 486-492 that infringe the following Neighbourhood Centre Zone core standards as a restricted discretionary activity pursuant to rule C1.9(2): • H12.6.3 – Residential at ground floor (i.e. to permit residential at ground floor); • H12.6.4 – 3m side and rear yards (i.e. to permit buildings to be setback 1m from the side and rear boundaries).	**Lots with Split Neighbourhood Centre/ Residential Mixed Housing Urban Zone (MHU Zone Standards Apply)** Lots 1026 and 486-492 contain split zoning of Residential - Mixed Housing Urban / Business - Neighbourhood Centre (NC) zone. A blanket land use consent approval is provided to exclusively apply Mixed Housing Urban standards to Lots 1026 and 486-492. The approval enables: (a) Construction of new residential buildings within the Business – NC zone; (b) Residential dwellings at ground floor; and

Lot Number	Blanket Land Use Consent Sought	Corresponding Consent Notice to be Applied[5]
		(c) Infringements to NC zone side and rear yards. All future residential development on these lots must be designed to implement the Mixed Housing Urban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Urban zone standards. The NC zone standards do not apply.
37-39, 100, 139-141, 173-185, 189-190, 214, 217-220, 249-250, 295-298, 357-375, 574-579 & 583-588.	Blanket land use consent is sought for new residential buildings that do not comply with the following Residential – Single House Zone standards on Lots 37-39, 100, 139-141, 173-185, 189-190, 214, 217-220, 249-250, 295-298, 357-375, 574-579 & 583-588. This requires consent as a restricted discretionary under rule H3.4.1(A36) and C1.9(2): • H3.6.10 – Building Coverage – to permit buildings to have a maximum coverage of 40%	**Application of MHS Zone Standards** A blanket land use consent approval is provided to exclusively apply Mixed Housing Suburban standards to Lots 37-39, 100, 139-141, 173-185, 189-190, 214, 217-220, 249-250, 295-298, 357-375, 574-579 & 583-588. All future development on these lots must be designed to adopt the Mixed Housing Suburban zone activity table and standards or seek resource consent to infringe the applicable Mixed Housing Suburban zone standards.
310-311 & 431.	Blanket land use consent is sought for new residential buildings that do not comply with the following Residential – Mixed Housing Suburban zone standards on Lots 275, 306-311, 315-316, 424-431, 448, 468-470, 533-539 and 555-560 . This requires consent as a restricted discretionary under rule H4.4.1(A34) and C1.9(2): • H4.6.4 – Height – to permit a maximum height of 11m;	**Application of MHU Zone Standards** A blanket land use consent approval is provided to exclusively apply Mixed Housing Urban standards to Lots 310-311 & 431. All future development on these lots must be designed to adopt the Mixed Housing Urban zone activity table and

Lot Number	Blanket Land Use Consent Sought	Corresponding Consent Notice to be Applied[5]
	• H4.6.5 – HIRB – to permit a HIRB of 3m + 45°; • H4.6.7 – Yards – to permit a front yard setback of 2.5m; • H4.6.9 – Building Coverage – to permit a maximum building coverage of 50%; and • H4.6.10 – Landscaped Area – to permit a minimum landscaped area of 35%.	standards or seek resource consent to infringe the applicable Mixed Housing Urban zone standards.

A consent notice is also proposed on the relevant lots to ensure future development on the sites are subject to the activity table and standards in the zone stated in Table 5 below. For the benefit of future lot Build Partners and owners, along with the regulatory authority, the consent notice will specify that dwellings and infringements to development standards were approved under the land use and subdivision consent. All future development on these lots must comply with the rules and standards of the applicable zone noted in the consent notice, unless otherwise approved under resource consent.

Table 5: Affected Lots with Split Zoning and Proposed Application of Zones

Lot Number	Existing (AUP(OP) Zoning	Development Standards be Applied through Consent Notices
Superlots		
Lots 1001, 1002, 1003 & 1006	Open Space Conservation Mixed Housing Suburban	Mixed Housing Suburban
Lots 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1019, 1020, 1021, 1027	Single House	Residential Design Outcomes and Control Standards
Lots 1017, 1018	Single House Mixed Housing Suburban	Residential Design Outcomes and Control Standards
Lot 1024	Open Space Conservation	Mixed Housing Urban
Lot 1025	Open Space Conservation Mixed Housing Urban	Mixed Housing Urban
Lot 1026	Neighbourhood Centre	Mixed Housing Urban

Lot Number	Existing (AUP(OP) Zoning	Development Standards be Applied through Consent Notices
	Mixed Housing Urban	
Lot 1050	Single House	Neighbourhood Centre
Residential Lots		
Lots 580-582	Single House Mixed Housing Suburban	Single House
Lots 1 & 8	Open Space Conservation Mixed Housing Suburban	Mixed Housing Suburban
Lots 37-39, 100, 139-141, 173-185, 189-190, 214, 217-220, 249-250, 295-298, 357-375, 574-579 & 583-588	Single House	Mixed Housing Suburban
Lots 40-44, 69-76, 101-105, 118-123, 136-138, 158, 172, 186-187, 191-192, 209-213, 215-216, 240, 242-248, 292-294, 302-305, 383-399, 570-573 & 580-582	Single House Mixed Housing Suburban	Mixed Housing Suburban
Lots 263-265 & 462	Mixed Housing Suburban Mixed Housing Urban	Mixed Housing Suburban
Lots 275, 306-309, 315-316, 424-430, 448, 468-470, 533-539 & 555-560	Mixed Housing Suburban Mixed Housing Urban	Mixed Housing Urban
Lots 310-311, 431	Mixed Housing Suburban	Mixed Housing Urban
Lots 281, 455-457, 478-479, 483-486* **486 is triple zoned across Open Space, Mixed Housing Urban and Neighbourhood Centre*	Open Space Conservation Mixed Housing Urban	Mixed Housing urban
Lots 480-482	Open Space Conservation	Mixed Housing Urban
Lots 486*-492	Neighbourhood Centre	Mixed Housing Urban

Lot Number	Existing (AUP(OP) Zoning	Development Standards be Applied through Consent Notices
**486 is triple zoned across Open Space, Mixed Housing Urban and Neighbourhood Centre*	Mixed Housing urban	
Lot 486	Open Space Conservation Mixed Housing Urban Neighbourhood Centre	Mixed Housing Urban

3.2.2.5 Pedestrian Access Lots

As detailed on the Scheme Plan (**Appendix 2K**), nine public accessways will be created through the Stages 10-13 subdivision facilitating pedestrian and cycle access and permeability through the various block layouts. Accessway Lots 3001-3009 vary in size from 235m² and 1,313m² in size respectively and will vest in Auckland Council.

3.2.2.6 Jointly Owned Access Lots

As detailed on the Scheme Plan (**Appendix 2K**), 20 Jointly Owned Access Lots (**JOAL**) will be created to provide rear loaded access to a number of lots (single vacant residential lots and superlots) created by the subdivision. JOALs range in size depending on the number of lots they are serving and will be held in un-divided shares by the owners of the relevant lots.

The JOALs will provide safe access to the residential lots and are designed to meet relevant design and construction standards for access lots. The creation of JOALs in these locations assist to reduce the number of vehicle crossings onto Wainui Road the proposed stream edge roads within Stages 10 and 11.

3.2.2.7 Roads to Vest

The roads constructed throughout the subdivision will vest in Auckland Council. The roads to vest for each sub-stage are detailed on the Scheme Plan (**Appendix 2K**) and are identified as Lots 801-823. Further details of the roading network to be delivered in Stages 10-13 is set out in Section 3.4 below.

3.2.2.8 Land in Lieu of Reserves (Neighbourhood Parks)

As detailed on the Scheme Plans (**Appendix 2K**), the proposal includes the creation of two neighbourhood parks that will vest in Auckland Council as Land in Lieu of Reserve. The parks are identified as Lot 7000 (located in Stage 10) and 7002 (located within Stage 12) and are 3,107m² and 3,852m² in size respectively. The parks are co-located with local purpose drainage reserves to provide a continuation of outdoor amenity areas across the development.

The proposed neighbourhood parks have been designed to align with the Auckland Council Open Space Provision Policy 2016, ensuring they provide accessible, functional, and appropriately scaled recreational spaces for the surrounding residential lots. Both parks meet the minimum area requirements for neighbourhood parks, being between 0.3 and 0.5 ha. Their locations within 400m of medium density residential areas ensure they meet the provision targets for accessibility,

offering convenient recreation opportunities within a short walk for local residents. Furthermore, their placement supports the wider development by complementing an approved Suburb Park within Stage 9 which provides additional open space and recreational amenities at the larger scale.

In terms of function, both parks include key amenities that align with the indicative provisions of a neighbourhood park. Each park features space for a dedicated 30m by 30m flat, unobstructed play space that allows for informal games and active recreation. Specimen planting is incorporated as per the landscape plans (**Appendix 2O**), contributing to the parks aesthetic appeal and ecological value. Additionally, pedestrian pathways facilitate movement through the spaces, enhancing accessibility and connectivity for residents. The parks configurations promote safe interactions, ensuring they serve as inviting and inclusive spaces for socialising, play, and respite.

Overall, the proposed parks are appropriately scaled and well-equipped to meet the recreational and social needs of the surrounding community, effectively fulfilling their role within the broader open space network.

3.2.2.9 Local Purpose (Drainage) Reserves

As detailed on the Scheme Plans (**Appendix 2K**), the proposal involves the creation of 21 Local Purpose (Drainage) Reserves. The reserves include Lots 6000-6022 and range in size from 1,281m² to 11,165m². These lots generally run along Milldale Stream and diverted intermittent streams throughout the site. The Drainage Reserves will contain public stormwater dry basins that will service the subdivision. Further details of these devices are provided in Section 3.5.1 below.

3.2.2.10 Balance Lots

Two balance lots will be created on the periphery of the Stages 10-13 subdivision identified as Lots 9010 and 9012. The lots will be held on their own record of title.

3.2.3 Subdivision Staging

The proposed development will be delivered in stages and sub-stages as detailed on the Scheme Plans (**Appendix 2K**). With regards to the sequencing of the subdivision, and the various infrastructural dependencies, civil construction will likely be undertaken in the following order:

- Stage 10A.
- Stages 10B, 10C, 10D, and 11A.
- Stages 11B, 11C, 12D, and 13A.
- Stages 13B, 13C, 13D, and 13E.
- Stages 13F, 12A, 12B, and 12C.

3.3 Engineering Design for Roading, Infrastructure and Utilities

This Application for Milldale Stages 10 – 13 is supported by a sufficient level of engineering design. The engineering drawings in **Appendix 2K** and the Infrastructure Report in **Appendix 2F** provide the necessary detail to understand the proposed land use and subdivision activities.

The Infrastructure Report outlines the development's design, covering key aspects such as earthworks and retaining, roading, stormwater, wastewater, and water supply, along with supporting calculations. These documents confirm that the proposed infrastructure and roading

network will adequately service the development and have been designed in accordance with relevant guidelines and standards.

Overall, the engineering drawings and Infrastructure Report define the scope of the proposed activities and anticipated development outcomes. Sufficient land has been allocated for vesting in the Council to accommodate transport and stormwater infrastructure.

Following approval under the FTAA, Engineering Approvals (**EA**) will be prepared and submitted in general accordance with the consent conditions and approved plans. At this stage, detailed engineering design, calculations, and plans will be provided to the Council for review, ensuring compliance with its development engineering standards.

3.4 Roading Layout and Design

3.4.1 Overview

Access to Stages 10-13 will be provided by the upgrading of Lysnar Road to an urban Collector Road, the upgrade of Cemetery Road to an urban Local Road, and the construction of the Cemetery Road Link (paper road) to part Collector Road and part Local Road. This provides a vital link between Cemetery Road and the Wainui Road / Argent Lane roundabout.

Stages 10-13 are situated on the most difficult terrain within the Wainui Precinct. The existing topography is considered steep within the context of the wider development. The site also includes several existing watercourses with steep terrain on the surrounding adjacent land to these watercourses. The site has a low level of 12m RL at the lower extents of the Milldale Stream towards Lysnar Road, and a high level of 82m RL at the western extents along Cemetery Road.

The subdivision design has also responded to the Wainui Precinct Plan as closely as possible while having consideration for the other constraining features, namely streams, steep contour and respecting levels at neighbouring property boundaries. Priority is placed on conformance of key precinct plan roads, such as the collector roads and the stream edge roads.

The location of a number of streams (one permanent and 15 intermittent) necessitates the construction of 11 culverts across the project area to facilitate road and pedestrian connections throughout the development. Overall, it is considered the landform design of Stages 10 to 13, responds well to the existing topography of the site while achieving compliant road gradients across the steep terrain.

The proposed roading layout and design is shown on the application plans (**Appendix 2K**) and is summarised below. This should be read in conjunction with the Transportation Assessment Report (**Appendix 2N**), Infrastructure Report (**Appendix 2F**), and Urban Design Report (**Appendix 2L**).

3.4.2 New Roads

The proposed roads generally align with the Wainui Precinct Plan in the AUP(OP) and are consistent with previously approved stages of the Milldale project as illustrated in **Figure 7** below. The layout and cross-section of these roads will tie into the existing and approved roads on either side of Stages 10-13. Road connections (including Cemetery Road Link and the Stream Edge Roads) are provided in accordance with the Wainui Precinct Plan.

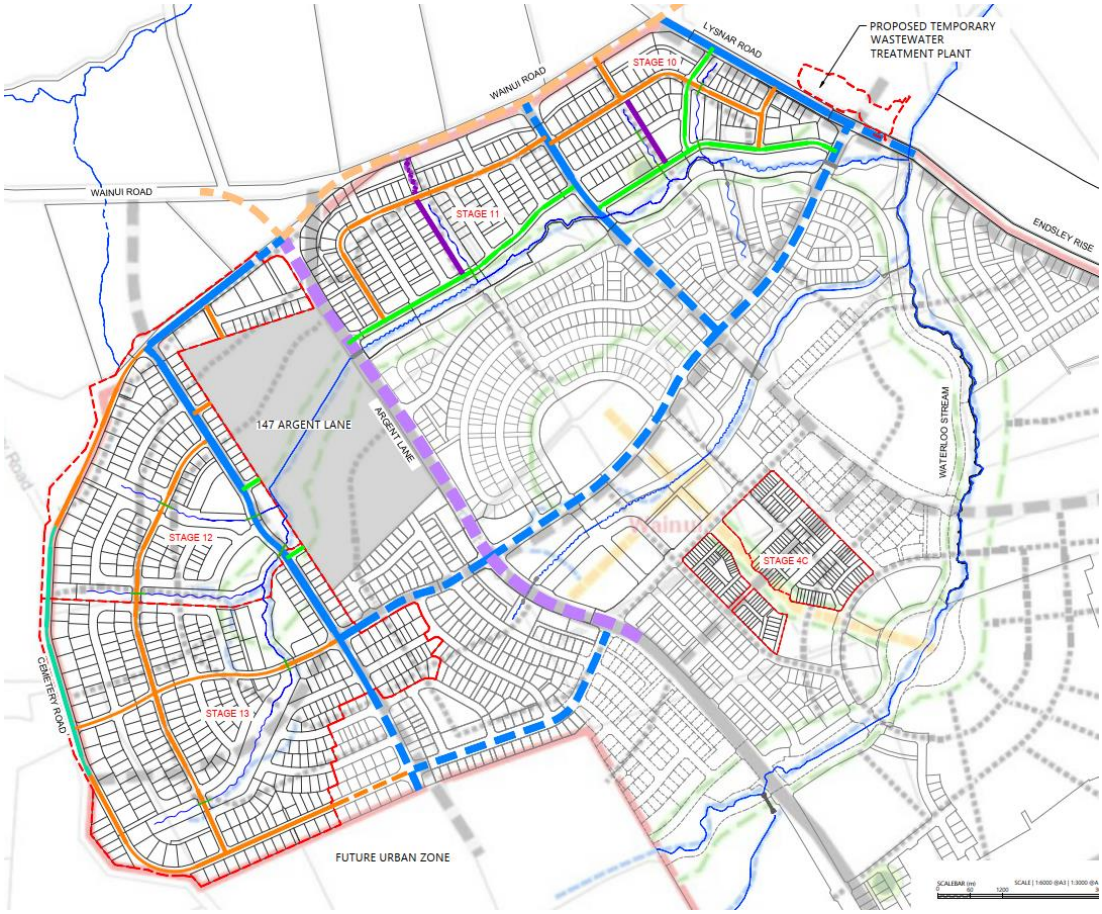

Figure 7: Precinct Conformance Plan

The proposed road types proposed are included in Table 6 below:

Table 6: Proposed Road Types

Road Typology	Road Name	Description
Collector Roads	Lysnar Road	Lysnar Road link between the consented Stage 8 and Wainui Road Upgrade - The Collector Road typology is a 24m wide dual crossfall road with 3.2m wide lanes in each direction, 450mm kerb and channel, 3.25m front berm, 2.0m cycleway, 300mm cycle kerb type 15, 1.80m footpath and a 1.0m back berm. The front berms will accommodate rain gardens, 2.25m wide fully indented parking bays and street trees where appropriate.

Road Typology	Road Name	Description
	Cemetery Road Link	Cemetery Road Link (western side of the Wainui Road and Argent Lane Road roundabout and will connect with the Cemetery Road Link to the west) - The Cemetery Road Link Collector Road typology, as an extension of the consented Wainui Road Upgrade, is a dual crossfall road with 3.2m wide lanes in each direction, 450mm kerb and channel, with berm widths varying each side. The west bound side berm has a 2.95m wide front berm corridor, 3.20m two-way cycleway, 300mm cycle kerb type 15, 1.80m footpath and a 2.10m back berm. The east bound side berm has a 2.45m wide front berm corridor, 1.80m footpath and a 2.10m back berm.
Local Roads	Cemetery Road Upgrade	This road typology provides a 20.12m road reserve which straddles residential development to the south and rural development to the north. The residential side of the road includes 2.7m wide lane, 2.15m front berm, 1.8m footpath, and 1.0m back berm. The rural edge side includes 3.0m wide lane, 1.0m wide shoulder, 3.6m grassed swale and 4.42m back berm (with variable width bank to tie into existing boundaries).
	Type 1	This road typology provides a 16.2m road reserve with a single crossfall carriageway. The road reserve comprises 2.7m wide lanes in both directions, 450mm kerb and channel on the downhill side and 300mm kerb and nib on the uphill side, a 2.15m wide front berm corridor, 1.8m footpath, and 1.0m back berm on both sides.
	Type 2	This road typology provides a 16.2m road reserve with a dual crossfall carriageway. The road reserve comprises 2.7m wide lanes in both directions, 450mm kerb and channel, a 2.15m wide front berm corridor, 1.8m footpath, and 1.0m back berm on both sides.
Stream Edge Road		This road typology provides a 16.9m road reserve with a single crossfall carriageway. The road reserve comprises 2.7m wide lanes in both directions, 450mm kerb and channel on the downhill side, and 300mm kerb and nib on the uphill side. The uphill side has a 2.15m front berm corridor, 1.80m footpath and a 1.0m back berm. The downhill side has a 2.65m front berm and a 3.0m recreational path.

A condition of consent is proposed in **Volume 6** that the designs for all public roads will be approved by Council at EA detailed design stage[6].

3.4.3 Intersections

The proposal involves a number of intersections throughout the Site outlined within **Table 7** below. Detailed design of these intersections will be provided at EA detailed design stage. Concept design details are shown on Drawings P24-128-00-2046-RD to P24-128-00-2047-RD in **Appendix 2K**.

Below is a summary of the typical intersections proposed:

Table 7: Proposed Intersection Types

Intersection Type	Description
Local to Local Road Mini Roundabout	This intersection is proposed for local to local road cross road intersections where longitudinal grades allow (<5%) for a roundabout typology.
Local to Local Road Raised Priority Intersection	This intersection is proposed for local to local road cross road intersections where longitudinal grades are too steep (>5%) for a roundabout typology. Raised thresholds will be used to control traffic speeds on all 4 legs.
Local to Local Road Tee	This intersection is proposed for local to local road tees. This detail has been used throughout completed stages of the Milldale development.
Local Road to Tee to Collector Road	This intersection is proposed for a local road tee onto a Collector Road (Type 1). This is a standard arrangement used throughout the completed stages of the Milldale development. Local Road Tee to Wainui Road (Arterial) and Cemetery Road Link (Collector) This intersection is proposed for local road tees onto the Wainui Road and the Cemetery Road Link. Concept design drawings have been provided for specific intersections where a typical design intersection could not be applied. These specific design intersections are shown on drawings P24-128-00-2046 to 2047-RD and include the following intersections: • 3 Leg Collector / Local Road Roundabout, Stage 13 (Drawing P24-128-00-2046); • 2 Leg Collector / Local Road Roundabout, Cemetery Road Link Stage 12 (Drawing P24-128-00-2046);

[6] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Public Road Construction

Intersection Type	Description
	• Collector / Local Road Intersection, Stage 13 (Drawing P24-128-00-2046); • Possible Future Concept Design for Cemetery Road / Young Access Link (Drawing P24-128-00-2046); • Left in / Left Out Local Tee to Argent Lane (Drawing P24-128-00-2047); • Cemetery Road Tee to Cemetery Road Link (Drawing P24-128-00-2047);and • Local Road Tees to Waiwai Drive (Drawing P24-128-00-2047).

A condition of consent is proposed in **Volume 6** that the concept designs for intersections will be approved by Council at EA detailed design stage[7].

3.4.4 Culvert Crossings

With several streams being retained and enhanced within the development, culvert crossings are necessary to maintain an urban structure with a high degree of connectivity as required by the Wainui Precinct Plan under the AUP(OP). Culvert crossing locations have been carefully considered with the roading design, with the design principle of minimising the number of culverts whilst still enabling a high degree of connectivity.

There are 11 culverts proposed throughout Stages 10-13 all of which are supporting road infrastructure across retained or realigned watercourses. All culverts have been designed to comply with both the AUP(OP) and NES-FM standards[8] and are summarised in **Table 8** below:

Table 8: Proposed Culvert Dimensions

Culvert #	Diameter (m)	Length (m)	Grade (%)
2-1	0.9	29.9	8.01
9-1	1.80	27.58	3.48
20-1	1.05	27.26	7.28
21-1	2.10	29	2.08
26-1	1.20	29.9	4.15
26-2	0.825	29.1	9.16
35-1	1.05	29.90	3.11

[7] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Public Road Construction
[8] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks Post-Construction

42-1	1.05	29.89	4.32
42-2	0.825	23.63	3.81
42-3	0.825	26.74	3.00
43-1	1.05	21.60	10.34

Following completion of the works, information required by Regulations 62 and 63 of the NES-FM will be submitted to Council[9].

3.4.5 Pedestrian Network

The proposed scheme allows pedestrian access to be well connected within Stages 10 to 13, as well as to the existing Milldale network (**Figure 8**). Footpaths at 1.8m wide are proposed in the road reserves as well as dedicated pedestrian accessways to provide mid-block connections and to increase pedestrian network permeability. A 3.0m wide recreational path is proposed along the full length of the stream-side of stream edge roads.

Pedestrian accessways are proposed at mid-block locations to provide connectivity and permeability to the pedestrian network. Pedestrian accessways will be 8.0m wide and include a 3.0m formed concrete path. Stairs will be required within five of these accessways where they traverse earth batter slopes.

Figure 8: Overall Milldale Green Links Network

[9] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Site-works Post Construction

A condition of consent is proposed in **Volume 6** that the designs for all pedestrian accessways, including those with stairs, will be approved by Council at EA detailed design stage[10].

3.4.6 Cycleway Network

The Wainui Precinct has a strong focus on cycle networks and the Stages 10 to 13 design facilitates this with off-road cycle way facilities. The proposed Collector Roads include 2.0m wide single way or 3.2m wide two-way off-road cycleways located in the road reserves as shown on the Engineering Drawings P24-128-00-2010-RD and 2011-RD in **Appendix 2K**. The cycleways are separated from the footpath by a 0.3m wide AT Type 15 cycle kerb.

Traffic calming measures have been considered at the intersections to reduce vehicle speeds creating a safer environment for cyclists to share the road carriageway with other road vehicles.

3.4.7 Pedestrian Stream Bridges

A key active modes connection is provided through Stage 11. This is an extension of the previous consented and constructed active modes link through the core of the Milldale development. This link extends from the Waterloo Reserve, through Stage 4C, the Milldale Town Centre, Milldale Reserve and into Stage 6. An active modes bridge is proposed to connect the extension of the active modes link across the Milldale Stream and then into Stage 11. The walkway then climbs adjacent to a realigned watercourse to link up with Wainui Road at the northern edge of the development. This path with be a 4m wide shared path and has a maximum gradient of 8%. It is proposed that the active modes link will connect into Milldale North in the future.

In addition to the above, there are four other pedestrian bridges proposed within the extent of the Site to provide pedestrian permeability across streams at appropriate locations. The timber bridges have been designed with vertical clearance and freeboard above the 100-year flood level. Piles will be required within the 100-year flood plain but will not be located within the regular streambed. The preliminary locations of bridges are shown on application drawing P24-128-00-2080-RD in **Appendix 2K**. These bridges are preliminary only and are subject to detailed structural design. Detailed design will be completed through the building consent process.

3.4.8 Public Transport

The existing public transport (**PT**) network within Milldale will be extended as part of the proposed collector road extensions with Stages 10–13. Drawing P24-128-00-2060-RD shows the existing and proposed PT networks. Bus stop catchments are indicated with the 400m radius circles on the plan.

The overall network coverage within Milldale is shown on this plan. With the exception of a cluster of lots at the south-western corner of Stage 13, all of Milldale sits within a 400m radius of an existing or proposed bus stop.

The proposal seeks to co-locate urban density with the PT network along the arterial roads within Milldale. This is present along Argent Lane and Wainui Road, where this application seeks to enable greater densities than what the operative zoning currently allows.

[10] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Public Streetscape Accessways, Reserves and Parks

3.4.9 Jointly Owned Access Lots

The proposal involves the creation of 20 joint owned access lots (**JOAL**) identified as Lots 4001-4021. The JOALs are required to provide rear access to lots that front collector and arterial roads, with a small number of rear lots/superlots requiring access solely from the JOALs. **Table 9** below outlines the lots that require JOAL access.

Table 9: Proposed JOALs

Lot Numbers	JOAL Number
Superlot 1004	Lot 4001
Superlot 1007	Lot 4002
Superlot 1008	Lot 4003
Superlot 1009	Lot 4004
Superlot 1010	Lot 4005
Superlot 1011	Lot 4006
Superlot 1012	Lot 4007
Superlot 1013	Lot 4008
Lots 177-188	Lots 4009 & 4010
Lots 193-197	Lot 4011
Superlot 1014	Lot 4012
Superlot 1015	Lot 4013
Superlot 1016	Lot 4014
Superlot 1017 & 1018	Lot 4015
Superlot 1022	Lot 4017
Superlots 1024 & 1025	Lot 4018 & 4019
Superlot 1027	Lot 4020
Lots 614 & 615	Lot 4021

As illustrated on the Engineering Plans (**Appendix 2K**), JOALs, servicing less than four lots, are typically 5m in width. JOALS, servicing four or more lots, are typically 7m in width. Each Joal has either a 3m or 4.5m formed concrete carriageway respectively, with 1m wide berm strips on either side. An additional 7m wide JOAL type may also be used, this includes provision for a 5.65m wide carriageway and a 1.35m wide footpath. The proposed JOALs are low speed environments ensuring the safety of residents using these spaces.

Vehicle crossings to individual lots via the JOALs will be determined at the time of any future development undertaken by third-party developers. Any lighting installed within the JOALs at this stage may conflict with future vehicle crossings. As such, the installation of lighting as part of this application is not considered appropriate and detailed lighting plans have not been provided.

3.4.10 Vehicle Crossings

Vehicle crossings to the proposed residential lots will be determined at the future Building Consent stage when the dwelling design, orientation and driveway locations are known.

Vehicle crossings within 10m of an intersection opposite side of a T-Intersection

A blanket land use resource consent is sought to infringe standard E27.6.4.1(3) in order to enable the construction of vehicle crossings to those lots on the opposite side of a T-intersection. This requires a technical infringement to the standard as crossings are within 10m of the intersection. This applies to lots where compliance is not able to be achieved with the AUP(OP) standard and only includes Lots 6-7, 36, 80-82, 101-103, 119-122, 136-139, 238-239, 266-267, 274-276, 598-600 and 1021. This blanket consent does not apply to corner lots on a T-intersections or other standard intersections. Along with the land use consent approval, a consent notice is proposed to be registered on relevant lots as detailed in the proposed conditions in **Volume 6** as follows:

- *For Lots 6-7, 36, 80-82, 101-103, 119-122, 136-139, 238-239, 266-267, 274-276, 598-600 and 1021, land use resource consent has been approved under Auckland Unitary Plan Standard E27.4.1 (A5) to infringe Standard E27.6.4.1(3)(a) relating to vehicle access within 10m of an intersection. The consent approval enables the construction of vehicle crossings to Lots 6-7, 36, 80-82, 101-103, 119-122, 136-139, 238-239, 266-267, 274-276, 598-600 and 1021 on the opposite side of a T-intersection.*

Along with the land use consent approval, a consent notice will be registered on all the lots identified above as detailed in the proposed conditions in **Volume 6**[11].

Vehicle crossing widths up to 4.8m

A blanket consent approval is sought under rule E27.4.1(A2) to enable the construction of vehicle crossings up to 4.8m wide, exceeding the maximum permitted width of 3.5m required under standard E27.6.4.3.2.

Typical vehicle crossing design and standard details are illustrated on drawing P24-128-00-2070-RD to 2072-RD (**Appendix 2K**. The proposal includes:

- All lots that front local or collector roads with a front boundary less than 14m may construct a Type A vehicle crossing (3.0m wide at the boundary and 4.5m wide at the kerb);

[11] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Consent Notices

- All lots that front local or collector roads with a front boundary less than 14m may construct either a Type A vehicle crossing (3.0m wide at the boundary and 4.5m wide at the kerb) OR a Type B vehicle crossing (4.8m wide at the boundary and 4.5m wide at the kerb); and
- All lots that front a collector road with a front boundary 14m or greater in width may construct a Type C vehicle crossing (4.8m wide at the boundary and 4.8m wide at the kerb).

Along with the land use consent approval, a consent notice will be registered on all residential lots as detailed in the proposed conditions in Volume 6[12].

Driveway gradients

A blanket resource consent is sought under standard E27.6.4.4(3) to enable the construction of driveways that exceed the maximum gradients for safety platforms of 1 in 20 for the first 4m length. This applies to lots where the driveway will slope from the road up to the garage or parking area. Along with the land use consent approval, a consent notice will be registered on all lots in the proposed conditions contained in Volume 6 as follows:

- *All private driveways on standalone residential dwellings on single house lots that grade up from the road boundary must be designed and constructed to have a maximum 12.5% grade as shown on Woods drawing P24-128-00-2075 rev 1, dated February 2025 unless approval from Council and Auckland Transport is obtained to deviate from this design. The crossfall gradient of non-standard vehicle accesses for which a blanket consent has been approved must not exceed 2%*

Along with the land use consent approval, a consent notice will be registered on all residential lots as detailed in the proposed conditions in Volume 6[13].

3.5 Infrastructure and Utilities

The following details the proposed stormwater, wastewater, potable water supply and utilities servicing for the development which should be read in conjunction with the application drawings attached in Appendix 2K and the Infrastructure Report attached in Appendix 2F.

3.5.1 Stormwater

A new public stormwater network is proposed to service the proposed subdivision. This will be established through an extension of the existing public stormwater lines located within and adjoining the site. The proposed piped networks will be designed to discharge watercourses while maintaining the pre-development flow rate of the existing watercourses. The proposed stormwater design incorporates:

- The construction of a public reticulated stormwater network across 18 catchments to convey primary flows. Stormwater runoff up to the 10% AEP storm event (inclusive of climate change) will be conveyed through the reticulated network;
- Flows from stormwater events greater than the 10% AEP storm will be conveyed via roadways and secondary flow paths to the permanent streams/watercourse without risk of damage to properties;

[12] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Consent Notices
[13] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Consent Notices

- Stormwater catchments will discharge to watercourses via wingwall and scruffy dome outlets. Stormwater outlets to the streams will be designed in accordance with Chapter 13 of Auckland Council TP10. Each structure and channel will be designed to minimise any scouring or erosion within the water course, while conveying the 10% AEP flow. Specific details will be provided at EA detailed design stage;
- At-source management and quality treatment, including 21 dry basins to be constructed within local purpose (drainage) reserves. The dry basins will have a scruffy dome basin outlet to the stream with scour protection; and
- On-site stormwater mitigation devices shall be provided within each lot (at building consent for each lot development).

Stormwater management will meet the requirements set out in the approved Wainui East Stormwater Management Plan (**SMP**) which was approved as part of the Wainui East NDC (Council reference REG-68809), and is now amalgamated into the Auckland-wide NDC. The SMP is in accordance with the Stormwater Management Devices in the Auckland Region – Auckland Council Guidance Document 2017/001 (**GD01**). Detailed information is available in the stormwater assessment in the Infrastructure Report (**Appendix 2F**).

3.5.2 Wastewater

As detailed on drawings P24-128-4000-WW series in **Appendix 2K** and the Infrastructure Report in **Appendix 2F**, a new public wastewater network is proposed to service the subdivision. This will be established through an extension of the existing public wastewater lines located within and adjoining the site. Stages 10 and 11 will discharge into the public wastewater transmission main via a short section of wastewater network through Stage 8. Stages 12 and 13 will connect into the existing 300mm trunk network line. This line extends from the wastewater transmission line through Stages 5, 6, and 7 into the lower end of the Stages 12 and 13 catchments.

A wastewater pipe bridge is proposed to cross a watercourse at the lower end of Stage 13D. This is to enable a gravity connection into the lower level lots within this stage. It is proposed to co-locate this pipe bridge with a proposed pedestrian to enable screening on the pipe. Both the wastewater pipe and pedestrian bridge will be located clear of the 100-year flood plain. Detailed design of this wastewater pipe and pedestrian bridge with be provided at EA detailed design stage.

Detailed design of the wastewater reticulation for the site will be undertaken in accordance with the Watercare Code of Practice standards for engineering design and construction as part of the future Engineering Plan Approval applications.

3.5.2.1 Wastewater Network Capacity

As set out in the Overview Report (**Volume 1**), and the temporary WWTP Report (**Volume 4**), to underpin the significant investment and provide certainty to the existing and future Milldale community, the Applicant has opted to consent and construct a temporary wastewater treatment facility to allow the development to continue at its current construction pace. The WWTP would operate over the period where Army Bay is at capacity and be decommissioned when the facility has capacity to accommodate the Milldale development. However, the WWTP may not be required if development in the wider Army Bay catchment occurs at lower densities and/or at a slower rate than Watercare currently anticipates.

Given the current uncertainty around the need for the WWTP, a condition of consent has been included within the Milldale Stages 10 – 13 conditions which requires each stage of the development to provide confirmation that adequate wastewater capacity is available within the network for the relevant number of lot connections. If capacity is not available at the respective stage, the 224(c) must not be approved until the temporary WWTP is constructed, commissioned and fully operational[14].

3.5.3 Potable Water Supply

Each residential lot will be provided with a connection to a potable water supply. Existing water supply infrastructure for Milldale has been constructed in Stages 1-5, parts of Stage 6 (the remainder of Stage 6 is currently under construction) and as part of the water supply trunk infrastructure for the wider catchment. This infrastructure is sized to supply water including the water demands from within Stages 10-13.

The existing water reticulation in Stages 5, 6 and 7 will be extended into Stages 10-13 to provide water supply connections.

Fire hydrants will be provided in accordance with the minimum spacing requirements contained in firefighting standard SNZ PAS 4509:2008.

3.5.3.1 Booster Pump Station

A booster water pump station is proposed to be installed on Lot 474 for the purpose of potable water servicing for those parts of the project area that are elevated above RL 50m for the short to medium term. Details regarding the layout and elevations of the works are located within the Architectural Concept Plans within Appendix G of the Infrastructure Report (Appendix 2F).

The booster pump is required until such time as the water supply from Orewa 3 main is available as agreed to by Watercare. Portions of Orewa 3 have already been completed by FHLD for Watercare and Watercare are due to commence the next stage on Highgate Parkway into Wainui Rd this year.

The pump station has been designed to comply with relevant Watercare standards, noise and vibration standards and with the MHU built form and location standards of the AUP(OP), with the exception of the landscaped area, where a 1.4% infringement requires consent as identified in Figure 9 below:

[14] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Wastewater and Water Reticulation

LOT 474	AUP COMPLIANCE SUMMARY
SITE AREA	435m²

STANDARDS	CONTROL	ALLOWED	PROPOSED	COMPLIANCE
H5.6.4	BUILDING HEIGHT	11m max.	Approx 4.8m	✓
H5.6.5	HIRB	2.5m + 45°	2.5m + 45°	✓
H5.6.6	ALTERNATIVE HIRB	8.0m + 60°	8.0m + 60°	✓
H5.6.8.1	YARDS (FRONT/SIDE/REAR)	2.5m / 1.0m / 1.0 min.	5.5m / 1.15m / 7.4m	✓
H5.6.9	MAX. IMPERVIOUS AREA	261m² (max. 60%)	260m² (59.8%)	✓
H5.6.10	BUILDING COVERAGE	196m² (max. 45%)	24m² (38.3%)	✓
H5.6.11	LANDSCAPED AREA	152m² (min. 35%)	146.3m² (33.6%)	☒

Figure 9: Assessment of Booster Pump Station against AUP(OP) standards

With regards to noise and vibration standards, Styles Group (Appendix 2P) conclude that the proposed building will comply with the residential noise standards due to the following mitigation measures:

- The pumping station will achieve compliant noise levels through the use of precast concrete and blockwork walls, acoustic-rated doors, and a high-performance roof system. Ventilation will be limited to specific facades with acoustic louvres to minimize noise emissions;
- Water pumps will be fitted with vibration isolation measures to reduce operational noise and structural vibrations; and
- A 1.8 m high acoustically effective fence will be installed atop a 1.35 m retaining wall on the western boundary, creating a total barrier height of approximately 3.15 m relative to the pump station's finished floor level.

In accordance with Watercare's Architectural Design Guidelines, the pump station will be designed to integrate with the adjacent public open space (Figure 10). There is sufficient space within the site for vehicle manoeuvring. A 5m wide driveway is proposed to provide access to the site which requires consent for being over-width.

Figure 10: Artist's Impression for Proposed Booster Pump Station (Source: Architectural Drawings Appendix 2F)

3.5.4 Utilities

Preliminary discussions with service providers indicate that there is sufficient capacity within the respective power supply, gas, and telecommunication networks to service the proposed subdivision and future land use development. In relation to utilities:

- Power reticulation will be provided for all lots by an extension of the existing reticulation in the surrounding road network. The extension and any upgrades will be designed by Vector;
- Telecommunication reticulation will be provided for all lots by an extension of the existing reticulation in the surrounding road network. The extension and any upgrades will be designed by Tuatahu; and
- Natural gas is not proposed in Stages 10-13.

3.6 Vegetation Management

As identified in the Arboricultural Report (**Appendix 2B**) and Ecological Assessment (**Appendix 2C**), there are a number of trees located within the Stages 10-13 works area. Drawings P24-128-1250-EW – P24-128-1253-EW – Earthworks in Riparian Margins (**Appendix 2K**) sets out the areas of vegetation to be removed and replanted.

The Arboricultural Report has identified a total of approximately 747 trees growing across the Stages 10-13 development area. These include trees within road reserves, residential sites and within areas of the site zoned Open Space – Conservation Zone. Additionally, trees were also identified within the riparian margins of Milldale Stream.

Of the 747 trees surveyed across the site, 697 trees require removal either due to earthworks, or being identified as undesirable pest plants. Two trees require works within their protected root zones (PRZ). All remaining trees will be clear of the line of works and will be retained.

The proposed earthworks necessitate the removal of these trees, with resource consent required under the provisions of the AUP(OP) to authorise the removal of 474 trees due to their location within land zoned open space, within the road reserve, and within riparian margins. Where trees are located outside of these areas or are identified as pest plants, their removal is a permitted activity under the AUP(OP). Two trees will require works within their PRZ.

The approach to tree removal is on a needs-must basis, with the intention of retaining as much of the native understory vegetation around Milldale Stream as practicable. This can be achieved by adjusting the line of earthworks where possible to minimise root disturbance. The removal of vegetation from the riparian margins has been classified by the Ecologist as moderate, which will be mitigated to positive.

3.6.1 Street Tree Removal

Of the 697 trees requiring removal, the proposal involves the removal of 210 trees within the road reserve. Arborlab has identified that 79 of the trees require resource consent for their removal. Tree Owner Approval (TOA) will be sought for the removal of all 210 trees to be removed.

3.6.2 Riparian Tree Removal

Of the 697 trees requiring removal, the proposal involves the removal of 135 trees within land zoned as open space that are within the riparian margin. Of these trees to be removed, 59 are identified as non-pest plants, and 74 are identified as pest plants in excess of 4m in height and/or 400mm girth. These require resource consent for their removal.

Two trees within the open space zone and withing the riparian margins will require resource consent for works within their PRZ.

Of the 697 trees requiring removal, the proposal involves the removal of 350 trees within land zoned as residential that are within the riparian margin. Of these trees to be removed, 260 are identified as non-pest plants. These require resource consent for their removal.

3.6.3 Wetland Vegetation Removal

The proposal will also involve the removal of vegetation within 20m of a wetland. The EIA has confirmed that the ecological value of vegetation being removed is low. Vegetation clearance and works will be undertaken in accordance with the recommendations of the EIA by Viridis, included as Appendix 2C, including clearance occurring outside of bird breeding season (or nest surveys undertaken) and the preparation of a Lizard Management Plan (LMP).

3.6.4 Replacement Tree Planting

Replacement planting is proposed to partially mitigate the loss of the vegetation within the riparian margins of Milldale Stream and diverted intermittent stream riparian margins. Currently the streams are highly modified by previous agricultural practices, contain a general lack of riparian vegetation, and are devoid of suitable aquatic habitats. Enhancing this area with native species will mitigate the loss of vegetation, increase environmental benefits, and create a more desirable amenity feature within the development area.

Most of the removed vegetation will be replaced with new riparian vegetation once earthworks and subdivision civil works have been completed. In addition to the 3:1 replacement of the removed vegetation, a significant area of planting is proposed within the riparian yard and the remainder located directly adjacent to the riparian yard for a total amount of 44,461m². This replanting constitutes a significant increase in habitat for native fauna including birds and lizards.

The proposed re-vegetation strategy is detailed in Section 3.6.6 below.

3.6.5 Vegetation Removal Methodology

The proposed vegetation removal is on a needs-must basis and will be carried out in accordance with recommendations of the Arboricultural and Ecological Reports including:

- Removal of any vegetation will be undertaken by qualified arborists implementing modern arboricultural techniques, taking care to avoid damage to any retained vegetation[15];
- Removal of vegetation should occur outside the bird nesting season. If clearance is proposed an ecologist should be engaged to confirm if nesting behaviour and/or nests are present around the site;
- Replacement planting will be undertaken on a 3:1 basis as part of a mitigation planting plan developed for the riparian margin of Milldale Stream and implemented within the first planting season following the completion of earthworks and civil works within the site – generally between June to September. This ratio is consistent with other mitigation planting within Milldale; and
- Auditing reports detailing the works that will be monitored will be compiled by the Appointed Arborist and made available to Auckland Council upon request.

3.6.6 Riparian Reserve and Dry Basin Planting

Planting is proposed within the road reserves, neighbourhood reserves, pedestrian accessways and stormwater dry basins as discussed below.

3.6.6.1 Neighbourhood Reserve Planting

Planting will be carried out within the proposed Neighbourhood Parks (Lots 7000 and 7002) as detailed in the Landscaping Plan prepared by LASF Landscape Architects (**Appendix 20**). The planting will consist of a mixture of large specimen tree species both native and exotic.

3.6.6.2 Riparian Reserve and Offset Planting

The riparian margins of Milldale Stream (classified as a permanent watercourse) is proposed to be planted to offset vegetation removal within the site and as part of the compensation package relating to stream and wetland reclamation.

Planting includes mixed revegetation planting and amenity edge planting adjacent to the stream edge shared road/footpath. As the earthworks methodology will result in the retention of native vegetation where possible, the mitigation planting will result in an overall net benefit in riparian vegetation within the extent of the project area.

[15] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks During-Construction

The planting of the riparian margins of all retained/diverted streams within the site is identified on the Riparian Reserve and Offset Planting Plans prepared by Beca (**Appendix 2Q**) and is summarised in **Table 10** below. The plans indicate the areas, species, number of plants and size at planting. The plants will include a mixture of native and exotics for amenity purposes. Implementation and restoration measures are recommended accordingly. The proposed plants range in species and include a range of native species suitable for the environment and will contribute to the ecological diversity within the area.

Table 10: Planting within Riparian Reserves

Planting Area	Plant Species (Common Name)	Area of Planting (approx.)	Plant Numbers (approx.)
Amenity Edge Planting	Coprosma, Lomandra and Small Leaved Pohuehue	22,930m²	22,930
Lower Embankment Planting	Mingi Mingi, Karamu, Cabbage Tree, Toe toe, Lacebark, Kanuka, Pukatea, Manuka, Mahoe, Mapou, Harakeke, Ribbonwood and Hebe.	13,076m²	13,076
Stream Edge Planting	Purei, Rautahi, Cabbage Tree, Toe toe and Giant Umbrella Sedge.	8,893m²	8,893
Upper Embankment Planting	Totara, Tarairi, Karamu, Cabbage Tree, Karaka, Kahikatea, Rimu, Kohekohe, Lacebark, Rawarewa, Kanuka, Manuka, Mahoe, Mapou, Harakeke, Lemonwood and Puriri.	22,492m²	22,492

A condition of consent is proposed in **Volume 6** that detailed landscape designs and specifications for riparian margins will be approved by Council at EA detailed design stage[16].

3.6.6.3 Stormwater Dry Basin Planting

Planting will be carried out within the proposed stormwater dry basins as detailed in the Landscaping Plan prepared by LASF Landscape Architects (**Appendix 2O**). The planting will cover an area of approximately 10,850m², include 10,850 individual plants, and largely consist of species appropriate for stormwater dry basins, including:

- Wetland Species: Apodasmia, Juncus & Carex;
- Basin Margin Species: Carex;
- Mixed Native Revegetation Species: Cordyline, Coprosma, Toetoe, Phormium & Hoheria; and
- Amenity Edge Species: Lomandra & Coprosma.

[16] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Public Streetscape, Accessways, Reserves and Parks

A draft Landscape Maintenance Plan (**LMP**) has been included within **Appendix 2O** which details the maintenance frameworks for the proposed landscape areas. Conditions of consent are proposed in **Volume 6** that detailed landscape designs and specifications for riparian margins will be approved by Council at EA detailed design stage and that the final LMP must be provided prior to the issue of 224(c)[17].

3.6.7 Streetscape Landscaping

Landscaping is proposed within the berms of the road reserves and pedestrian accessways proposed throughout the subdivision. The landscaping is illustrated on the Landscaping Plan prepared by LASF Landscape Architects (**Appendix 2O**).

The tree species has been selected based on the roading typologies (i.e. collector road and local roads). Species have also been selected to compliment landscaping completed in earlier stages of the Milldale development.

A draft Landscape Maintenance Plan (**LMP**) has been included within Appendix 2N which details the maintenance frameworks for the proposed landscape areas. Conditions of consent are proposed in **Volume 6** that detailed streetscape landscape designs and specifications will be approved by Council at EP detailed design stage and that the final LMP must be provided prior to the issue of 224(c)[18].

3.6.8 Earth Batter Slope Landscaping

Landscaping will be provided on the earth batters proposed to be constructed between a number of residential lots where the underlying topography necessitates a change in height between lots. The landscaping is illustrated on the Landscaping Plan prepared by LASF Landscape Architects (**Appendix 2O**).

The earth batters will be planted with a range of species that require limited maintenance and establish a good ground cover such as phormium tenax, Lomandra and Apodasmia. The batters will be finished in bark mulch or coconut matting to suppress weeds.

In the proposed conditions contained in **Volume 6** a consent notice will be registered on all lots with earth batters to ensure landscaping is retained and maintained[19], and that no works may be carried out that would compromise the integrity of the slopes. Buildings will not be allowed.

3.7 Earthworks

The proposed earthworks are required to provide a suitable land contour for the residential lots and associated roads and infrastructure.

Details of the proposed bulk earthworks, civil earthworks, associated erosion and sediment control measures, along with geotechnical remediation works, groundwater dewatering and diversion, and contamination remediation and disposal are provided below. These should be read in

[17] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Public Streetscape, Accessways, Reserves and Parks
[18] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Public Streetscape, Accessways, Reserves and Parks
[19] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Consent Notices

conjunction with Infrastructure Report attached in **Appendix 2F** and the engineering drawings attached in **Appendix 2K**.

3.7.1 Design Objectives

The key drivers underpinning the proposed earthworks are:

- Achieve the intent of the Wainui Precinct Plan and AUP(OP) zoning with respect to road and pedestrian/cycling connectivity, open space areas adjacent to watercourses, deliver the roading hierarchy and compliant vertical and horizontal geometry (including collector and local roads), and enable the anticipated residential densities as defined by the zoning objectives of the AUP(OP);
- Facilitate road and pedestrian connections that tie into the existing and future road network (including intersections) in accordance with the Wainui Precinct Plan;
- Ensure the anticipated residential yields are met which formed the basis for current and future infrastructure planning and investment to provide for the high demand for housing within the Auckland Region;
- Facilitate and deliver the anticipated urban form including the enhanced and restored ecological corridor adjacent to Milldale Stream;
- The minimisation and, where practicable, avoidance of visually dominant retaining walls;
- Tie into existing levels and gradients on adjacent sites; and
- Enable a landform free of flooding hazards. This necessitates the construction of public infrastructure in a resilient and efficient manner that minimises public expenditure and maintenance costs in the future.

3.7.2 Bulk Earthworks

The application seeks land use consent to undertake 774,125m³ of cut and 1,034,700m³ fill earthworks over an area of 71 ha to facilitate building platforms, roading networks, infrastructure services and utilities.

The proposed earthworks involve cut depths of up to 11m and fill depths of up to 9m. A proposed Contour Plan and Earthworks Extents Plan is provided with the application drawing set in **Appendix 2K**. Any geotechnical considerations will also be undertaken in unison with the earthworks in accordance with the recommendations contained in the GIR prepared by CMW (**Appendix 2A**). Following the completion of each stage of earthworks, the site will be stabilised and a geotechnical report will be completed.

Bulk earthworks are programmed to commence once the relevant regulatory and compliance approvals are in place. Assuming a start date of October 2025, earthworks will be completed over three earthworks seasons until bulk earthworks are completed in April 2028. An earthworks season is generally 1 October through to 30 April.

The proposed finished site levels detailed in application drawing set in **Appendix 2K** take into account the following constraints:

- The lower levels of the site are generally set by Milldale Stream. This stream extends from Lysnar Road, along the southern edge of Stages 10 and 11, then through into the eastern area

of Stages 12 and 13. The levels at higher elevations are set by the ridgeline roads of Wainui Road and Cemetery Road;

- The general structure of the subdivision and landform design works with steep pre-development contour. This is achieved with the majority of streets running with the contour and the design includes mid-block retaining features absorbing height differential up the slope;
- Priority is placed on conformance with key precinct plan roads such as the proposed collector roads and stream edge roads;
- A majority of the minor streams within the site either require removal and realignment. These streamworks enable the potential to better align with the precinct plan and create a logical urban structure that will provide a balance between urban design and ecological outcomes; and
- Neighbouring properties (including 147 Argent Lane located adjacent to Stage 12) levels have been carefully designed not to compromise future development of this site as well as avoidance of natural hazards.

3.7.3 Works in Proximity to Streams and Wetlands

The proposal involves carrying out earthworks within the riparian yards of Milldale Stream and within proximity to wetlands on 147 Argent Lane. The extent of the proposed works is set out below.

3.7.3.1 Earthworks in the Riparian Yard

Earthworks within the riparian yards is unavoidable as part of the development of the site and involves approximately 4,144m³ cut and 200,962m³ fill over an area of 6.6ha.

The upper reaches of all intermittent streams across the site will be diverted to a new course. The proposed stormwater design ensures discharge of stormwater at the most upstream part of the watercourses while maintaining the pre-development flow rate of the existing watercourses. Based on the WWLA assessment, there is no reduction in groundwater baseflows to the streams because of the underfill drains and realigned stream picking up baseflow.

Specific erosion and sediment control measures will be installed around the works during earthworks to mitigate any potential adverse impacts on streams during works. These are identified on the engineering drawing within Appendix 2K.

3.7.3.2 Earthworks associated with Construction of Pedestrian Bridges and Culverts

With reference to the retained and diverted streams within the development, 11 culvert crossings and four pedestrian bridges are necessary to maintain the urban structure and enable a high degree of connectivity. The culvert construction methodologies are detailed on the Installation Plans included in the Application Drawings (Appendix 2K) and in the Infrastructure Report (Appendix 2F).

The proposed culverts and pedestrian bridges have been designed in accordance with best practice under the NES-FM and the AUP(OP). Once constructed, fish passage will be maintained. A condition of consent has been proposed for the preparation of a Fish Passage Monitoring and

Maintenance Plan (FPMMP) to be prepared prior to the commencement of works[20]. The FPMMP will specify the ongoing maintenance measures to be implemented for the proposed culvert structures to ensure ongoing fish passage is provided.

The construction of the culverts is likely to occur 'in the dry' meaning the stream flow will be temporarily stopped or temporarily diverted. Whilst there is the potential for fish to be isolated during this temporary works period, a Native Fish Capture and Relocation Plan will be prepared to inform construction works and ensuring fish are rescued by an experienced freshwater ecologist prior to any dewatering occurring. This is a proposed condition of consent as detailed in Volume 6[21].

Each culvert will be less than 30m in length, countersunk 25% into the streambed, and will be at least 1.3 x the width of the streambed to maintain the natural alignment and substrate of the stream, ensuring minimal ecological disturbance. They will also be equipped with flexible baffles to facilitate the movement of aquatic species. The culverts meet the permitted activity standards in the AUP(OP), specifically E3.6.1.15 and E3.6.1.14.

3.7.3.3 Earthworks in Proximity to Wetlands

Earthworks within Stages 10-13 site will result in the reclamation of 16 wetland features. This is required to enable urban development and is provided for under the NES-FM. The ecological values of these wetlands, the rationale for removal, and the proposed compensation is addressed in Section 3.8 below.

Earthworks are proposed within 10m of potential natural inland wetlands on 147 Argent Lane. As the applicant does not own this land and no formal classification process is possible, they are considered potential wetlands. Specific erosion and sediment control measures will be installed as appropriate around the earthworks area to mitigate any potential adverse effects on the adjacent wetlands during works. These are identified on the engineering drawings within Appendix 2K.

3.7.4 Earthworks Sequencing and Staging

As discussed within the Earthworks Methodology Report in Appendix 2R, due to the significant scale of the proposed works, bulk earthworks will be staged over three earthworks seasons (1 October to 30 April). Staging plans are included in Appendix 2K which identify the relevant areas of the Site to be earthworked. These areas will be agreed by the relevant regulatory authority at the commencement of each earthworks season[22].

During each earthworks season it is anticipated to have no greater than 30 hectares open and active at any given time (excluding any open areas associated with civil works/subdivision stages). A condition of consent is proposed as detailed in Volume 6[23].

As each season of works is completed, the works area will be stabilised and made available for a subsequent civil works stage.

To assist with accessing the civil works areas, it is proposed that there are two active earthwork areas in Stages 10- 11 and Stages 12-13 that will work simultaneously within the same earthworks

[20] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.3, Mandatory Conditions Required by Regulation 71 of the NES-FW
[21] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.3, General
[22] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks Pre-Construction Conditions
[23] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks During Construction Conditions

season but will remain within the 30 hectare threshold referred to above. The cut and fill volumes for each designated area is outlined in **Table 11** below.

Table 11: Proposed Earthworks for Stages 10-11 and 12-13

Stage	Area of Earthworks	Cut Volumes	Fill Volumes
10-11	23.1 ha	248,900m³	213,850m³
12-13	45.2 ha	485,200m³	736,000m³

3.7.5 Ancillary Stockpiles and Site Compounds

As discussed within the Earthworks Methodology Report in **Appendix 2R**, a number of existing construction compounds will be utilised throughout the various stages of earthworks. These compounds have been identified on Drawings P24-128-00-1200-EW – 1203-EW within **Appendix 2K**.

Temporary stockpiles will be required to store excess material to later be dispersed throughout the site. This stockpiles have been identified on Drawings P24-128-00-1200-EW – 1203-EW. The stockpiles are required to support the bulk earthworks activity and will be disestablished as the works progress. The stockpile is located more than 20m away from the identified stream on the identified site.

3.7.6 Retaining Walls and Earth Batter Slopes

Due to the height differentials across the site, and the need to tie in levels between Milldale Stream and Wainui Road/Cemetery Road, retaining walls and planted batter slopes are proposed. These measures will ensure levels established across the site facilitate acceptable grades for the proposed roading network and so lots that can accommodate future residential development. The retaining walls and planted batters will generally be located mid-block on the affected lots.

The proposed earth batters will be a 1 in 2 gradient and will be planted with low maintenance vegetation to minimise the need for access to the slope as detailed in Section 3.6.8 above. A 1.2m high pool type fence will be located at the top of each batter slope.

The proposed retaining walls range in height with the majority of the walls having a height of between 1.0 – 1.5m, and a maximum height of 3m. A 1.2m high pool type fence will be located at the top of each retaining wall.

As the retaining walls are located on internal lot boundaries, they will be screened by the future dwellings that will be located on each lot. The internal boundaries will be located on the lower side of the retaining wall (wholly within the lot), with a 150mm setback between the retaining wall and common boundary.

Similar to previous Milldale Stages, a blanket land use consent will be sought to confirm that where a retaining wall is located between residential lots, the measurement point for the height in relation to boundary control shall be undertaken from the top of authorised retaining wall and not from the approved ground level at the time of subdivision. This applies to Lots 2-5, 20-25, 188, 193, 198, 203-216, 237-239, 273-281, 266-272, 1022, 317-322, 497-502, 448-454, 475-482, 1024-

1025, 403-405, 441-447, 468-471, 472-473, 556-560 and 567-573. Along with the land use consent, a consent notice is also proposed as detailed in **Volume 6**[24].

3.7.7 Geotechnical Risks and Mitigation

A detailed analysis of the site geology and geotechnical constraints is outlined in the GIR prepared by CMW (**Appendix 2A**).

The proposal involves the implementation of the geotechnical remediation works recommended by CMW. The primary geotechnical hazards identified during earthworks operations are instability, problematic soils and settlement, requiring remedial actions as part of the earthworks operation to mitigate these hazards.

The GIR confirms that the site is suitable for the proposed earthworks. All earthworks and geotechnical remediation works will be supervised by a suitably qualified geotechnical engineer[25]. Additionally, a Settlement Monitoring Plan (**SMP**) for consolidation settlement due to the placement of fill must be submitted prior to the commencement of earthworks on site[26].

Following completion of the geotechnical remediation measures, the site will maintain an acceptable level of post-development residential risk from hazards.

A Geotechnical Completion Report (**GCR**) will be prepared upon completion of the earthworks. The GCR will:

- Report on the works undertaken;
- Confirm foundation design parameters;
- Describe future building and/or earthworks limitations; and
- Apply any restrictions that require further engineering investigation and/or design on individual lots to avoid future building works exacerbating a natural hazard.

A condition of consent is proposed in **Volume 6** that ensures the GCR is provided to Council to confirm that all residential lots and all super lots are stable and suitable for development when applying for a certificate under section 224(c) of the RMA[27].

3.7.8 Groundwater

The proposal involves a permanent diversion of groundwater due to the change in landform. The proposal involves a maximum excavation of 11m below the existing ground levels over and area of 1.7 ha.

As detailed within the Williamson Water and Land Advisory (**WWLA**) Groundwater Assessment in **Appendix 2S**, the proposed excavations below the groundwater table will occur within the lower portions of the site. The underlying soils contain very low permeability and the extent of drawdown from the proposed earthworks is not expected to extend far beyond the cut area. A drawdown of approximately 2m is expected within Stages 10-11 and 3m within Stages 12-13 (with a very small pocket of 5m drawdown in the southern portion). There are no buildings or services within the

[24] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.5, Consent Notices
[25] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks Pre-Construction Conditions,
[26] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks Pre-Construction Conditions
[27] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.1, Siteworks Post-Construction

Milldale site that will be affected by the drawdown induced settlement. Drawdown has been managed by the re-aligned streams and sub-soil drainage proposed.

All works will occur in accordance with the recommendations[28] contained in **Appendix 2S.** The extent of groundwater drawdown is typical of construction dewatering effects within low permeability materials. Based on the expected limited drawdown beyond the excavation and the low permeability of the soil, no mitigation or monitoring is required for the project.

3.7.9 Contamination Management

The DSI prepared out by GES (**Appendix 2H**) identifies that the site has a history of uses including a dairy farm, stockyard and orchard. GES have identified that it is likely Hazardous Activities and Industries List (**HAIL**) activities have been undertaken on the site including pesticide storage and waste disposal (milk shed effluent ponds). In addition, asbestos containing building materials have been utilised on the existing buildings.

A Site Management Plan and Remediation Action Plan (**SMP/RAP**) has been prepared by GES (**Appendix 2I**) which sets out the areas to be remediated or managed, methods of contamination remediation and management to be followed, along with health, safety and environmental protection measures. The recommendations included in the SMP/RAP will be followed during the site remediation works[29].

Within three months following completion of site remediation works, a Site Validation Report (**SVR**)[30] will be prepared and provided to the Council. The report will document the results of the remediation/management, validation inspection and sampling and will be prepared in accordance with the relevant Ministry for the Environment (**MfE**) Guidelines for Contaminated Land Management.

3.7.10 Erosion & Sediment Control and Adaptive Management

Erosion and sediment control will be managed in accordance with the Earthworks methodology Report in **Appendix 2R** and the Adaptive Management Plan[31] (**AMP**) prepared by Southern Skies Environmental in **Appendix 2T**. The AMP addresses the management of sediment-related effects that may still occur when full compliance with the consent is maintained in order to avoid or minimise adverse effects on the receiving environment. It includes details of processes and procedures that will be followed and confirms how the erosion and sediment control referred to above will be monitored and reported on. The AMP also includes methods used during construction to ensure that performances are managed appropriately, that all conditions of consent are complied with, and that adverse environmental effects remain within the range anticipated by the consent. One measure to be implemented during the construction phase is the requirement of an Adaptive Management Response Report (**AMMR**) to be prepared summarising the conditions during and after every rainfall trigger event[32]. A condition of consent has been proposed in **Volume 6** to this effect.

[28] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.4, Ground Dewatering and Groundwater Diversion Conditions
[29] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks During-Construction
[30] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks Post-Construction
[31] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks During-Construction
[32] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Adaptive Management

Erosion and sediment control measures will be installed prior to any works occurring on the site to minimise adverse effects associated with the discharge of sediment into the receiving environment[33]. A draft of the Erosion and Sediment Control Plan for Stages 10 – 13 has been included with this application, and the provision of a final plan prior to the commencement of earthworks has also been included as a condition of consent[34]. Earthworks will involve the installation of best practice erosion and sediment control measures, consistent with the standards set out under Auckland Council Guidance Document 2016/005 (**GD05**). Details of the measures are outlined in the Earthworks Methodology Report appended to the Infrastructure Report (**Appendix 2F**) and on Drawings P24-128-00-1500-EW – 1516-EW (**Appendix 2K**). The measures will include:

- The primary sediment controls for the site will be sediment retention ponds (**SRP**);
- Secondary controls include decanting earth bunds (**DEB**) for small areas not captured by SRP catchments, silt fences and super silt fences. There will also be a strong focus of erosion prevention prior to rain events;
- The 'last line of defence' approach will be implemented as a backup to the primary controls. It is proposed to erect a silt fence (**SF**) immediately beyond the extent of earthworks as a 'last line of defence' along both sides of all retained watercourses around the extents of the site; and
- Other devices which may be installed during the course of the works due to operational decisions including: clean water diversion drains; stabilised access roads; contour drains; super silt fences located along all watercourse margins; silt fences; hay bales; grass filter strips; and other controls if areas can no longer be serviced by the proposed devices.

The site will be progressively opened, closed, and stabilised within each completed earthworks area. Once all earthworks are completed, all erosion and sediment control measures will be removed and the works areas stabilised with grass seed and mulch.

A Chemical Treatment Management Plan (**CTMP**) will be submitted by the Contractor with pre-construction documents. The CTMP with detail the proposed flocculant treatment for the primary device. The application of Chemical Treatment will be via rainfall activated treatment systems. The application of Chemical Treatment shall be undertaken in accordance with GD05 and the Contractors approved CTMP.

3.7.11 Construction Controls and Noise/Vibration Levels

A Construction Noise and Vibration Report has been prepared by Styles Group (**Appendix 2P**). The report concludes that there are no high noise and vibration generating activities. Accordingly, the proposed earthworks will comply with the AUP(OP) permitted construction noise and vibration standards at all times. The applicant proposes to adopt the recommendations of the Styles Group report to ensure compliance.

Generally, noise-generating tools, motorised equipment, and vehicles associated with earthworks will operate within the following hours:

- Monday to Saturday: 7:00am - 6:00pm;
- Sundays or Public Holidays: no works; and

[33] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks Pre-Construction Conditions
[34] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks Pre-Construction Conditions

- All construction works between 07:00am and 07:30am will observe a minimum setback distance of 130 m from the dwellings at adjacent sites.

Typically, contractors will arrive at the work site before 7:00am and spend time readying machinery and vehicles and undertaking health and safety checks before commencing work at 7:00 am. Instances of machinery being returned, serviced, or maintained after 6:00 pm will also comply with permitted noise levels outlined in rule E25.6.27 of the AUP(OP). Any activity on the site before 7:00 am or after 6:00 pm will comply with the permitted noise levels detailed in rule E25.6.27 of the AUP (OP).

As is typical with a development of this scale, the provision of a Construction Management Plan (**CMP**) is proposed as a consent condition to ensure construction activities, and any traffic effects are appropriately managed.

3.7.12 Draft Management Plans

A high-level Draft CMP has been included in the Infrastructure Report (**Appendix 2F**) to provide an overview of the typical measures contractors implement to manage potential adverse effects associated with bulk earthworks and construction activities. This plan outlines strategies to mitigate environmental impacts and ensure compliance with relevant regulations.

The CMP incorporates the following key management plans:

- **Construction Traffic Management Plan (CTMP):** Addresses the safe and efficient movement of construction-related traffic, including site access, haul routes, parking, and measures to minimize disruptions to the surrounding road network;
- **Dust Management Plan (DMP):** Outlines strategies to control and mitigate dust emissions generated during earthworks and construction, including the use of water suppression, staging of works, and monitoring to minimize off-site impacts; and
- **Chemical Treatment Management Plan (ChTMP):** Details the use of chemical treatments for erosion and sediment control, specifying application methods, monitoring requirements, and environmental safeguards to prevent contamination of water bodies and surrounding areas.

Together, these plans ensure that the potential impacts of earthworks and construction are effectively managed throughout the project.

3.8 Wetlands and Streams

The proposal involves the reclamation of 16 natural inland wetlands within the subject site. All 16 wetlands on site are similar in nature having similar plant species composition, soil structure and hydrology.

The proposal also involves the partial reclamation (1,028.5m) and diversion (1,134m) of streams across the subject site. The streams have been assessed as having low ecological value.

The proposed reclamation and diversion is necessary to enable urban development on the site in a manner consistent with the Wainui Precinct Plan. The works are specifically contemplated by the NES-FM as a discretionary activity (refer to Regulation 45C).

The following sections summarises the proposed wetland and stream works, the design rationale, work methodology, mitigation and offset measures, where not otherwise addressed in the sections above. This is detailed further within the EIA prepared by Viridis in **Appendix 2C**.

3.8.1 Wetland Reclamation

The proposed earthworks and subdivision works will result in the complete reclamation of 16 wetlands within the site extent, and a further partial reclamation of a potential wetland within the adjacent site at 147 Argent Lane. A total of 2.02 ha of wetland is proposed to be reclaimed identified as indicated in **Figure 11** below. The reclamation of wetlands is required to deliver a landform suitable for residential and commercial development, and to deliver the roading and pedestrian/cycling network anticipated by the Wainui Precinct Plan.

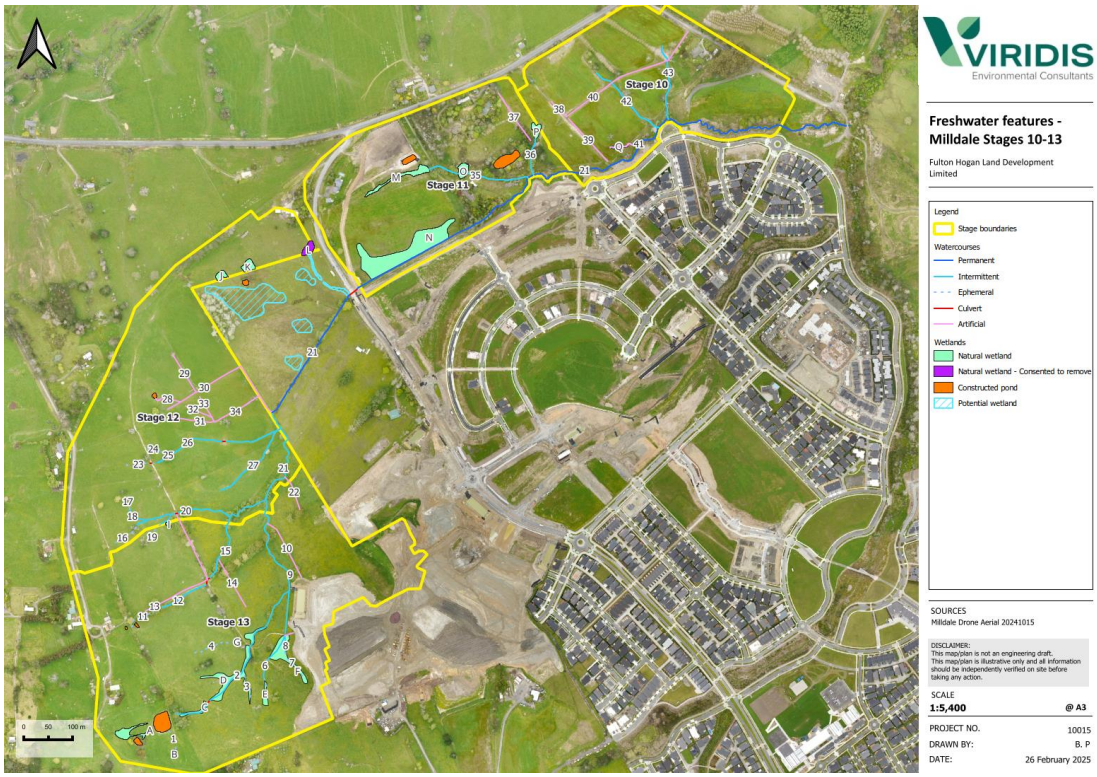

Figure 11: Identified Wetlands and Potential Wetlands within Site Extent and 127 Argent Lane

The loss of the wetlands functional roles of flood attenuation and nutrient capture will be appropriately mitigated through stormwater management. However, there will still be a loss of wetland extent and value, which is considered a significant residual effect.

Six 'potential wetlands' have been conservatively mapped on the neighbouring site at 147 Argent Lane (**Figure 12** below). These wetlands have been mapped as 'potential wetlands' on the basis that they could not be fully assessed and delineated due to site ownership restrictions. However, these wetlands were observed to be within 100 m of the proposed development.

Figure 12: Potential Wetlands mapped within 147 Argent Lane

Hydrological testing undertaken by WWLA (Appendix 2S) determined that with the exception of the north-western potential wetland, these wetlands are primarily supported by groundwater. The north-western wetland however, is predominantly surface water-fed in the upper portion while the lower portion is groundwater fed. The development involves the re-direction of stormwater runoff away from this wetland, removing approximately 66% of the surface water inputs. The wetland extent is expected to reduce from 6,300m² to approximately 2,025m², representing a 68% loss in extent. This significant reduction is likely to impact wetland function, including potential losses in habitat availability, hydrological connectivity, and ecological services.

A significant ecological restoration and enhancement offset project is proposed to address the ecological effects of the wetland reclamation which cannot be avoided, remedied or mitigated (Figure 13 below). This is detailed in Section 3.9 below and the EIA in Appendix 2C. The Milldale North offset site is located approximately 1.4km to the north and is within the same Ōrewa River catchment.

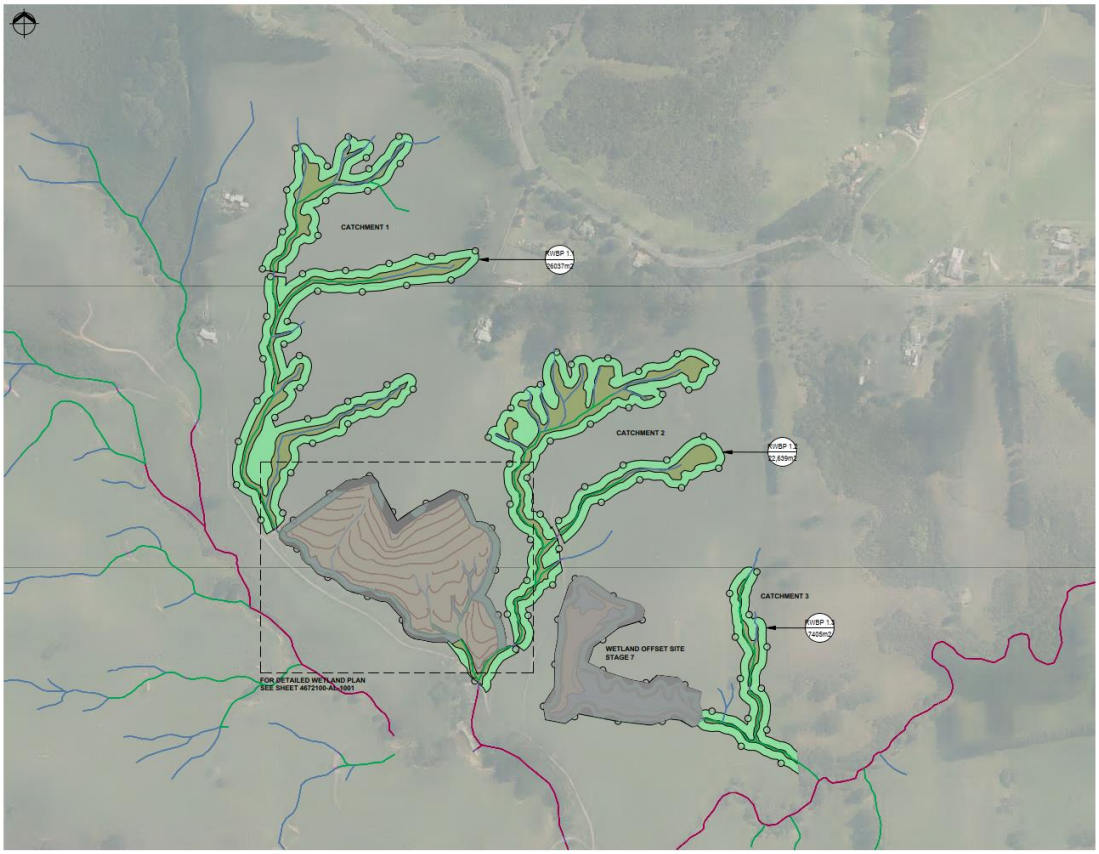

Figure 13: Offset Site Revegetation and Wetland Reclamation Plan

3.8.2 Stream Reclamation and Diversion

The proposed earthworks and subdivision works will result in the reclamation of 1,028.5m of identified streams within the site extent as indicated in Drawings P24-128-00-1250-EW – 1453-EW within **Appendix 2K**. A total of 1,134m of intermittent stream length is proposed to be diverted. The diverted channel will be created, and flows redirected prior to the original stream being removed.

The partial reclamation of and diversion of streams is required to deliver a landform suitable for residential and commercial development, and to deliver the roading and pedestrian/cycling network anticipated by the Wainui Precinct Plan. Stream recharge will be achieved by diverting an appropriate amount of the proposed stormwater network and underfill drainage into the uppermost reaches of these diverted streams. The stormwater network has been designed to replicate pre-development flows as closely as possible.

A significant ecological restoration and enhancement compensation project is proposed to address the ecological effects of stream reclamation and diversion which cannot be avoided, remedied or mitigated (**Figure 13** above). This is detailed in Section 3.9 below and the EIA in **Appendix 2C**.

3.8.3 Earthworks Design Rationale

The Wainui Precinct Plan (**Figure 14** below) details the master planned roading and pedestrian network and anticipated zoning that collectively delivers a well-connected urban environment within close proximity to public amenities such as schools, shops, parks and green spaces.

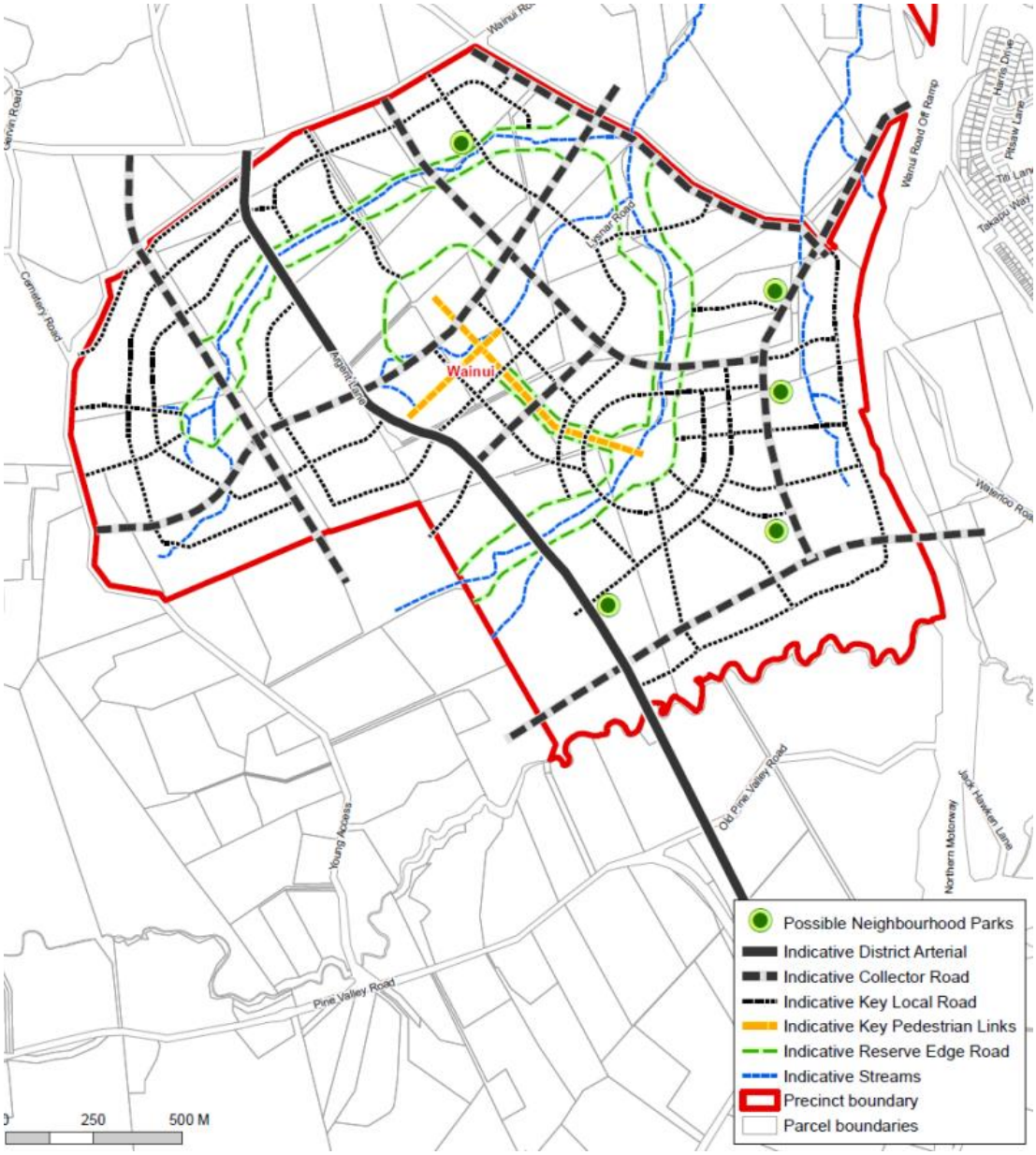

Figure 14: Wainui Precinct Plan 1

The Wainui Precinct Plan seeks to deliver a highly connected, walkable neighbourhood. The Urban Design Report and Earthworks Functional Need Memorandum (Appendix 2L and 2U respectively) highlight that this is critical to the transport mode shift to alternative transport options of public transport, cycling and walking. The road, cycle and pedestrian networks within Milldale have been master planned to ensure a high degree of connectivity and functionality. The proposal completes a number of key roading and pedestrian linkages as detailed in Section 3.4 above.

The wetlands and upper reaches of the intermittent streams identified across the site are proposed to be removed and diverted. Any efforts to retain these features would significantly and detrimentally interrupt the continuity and connectivity of the planned and existing movement networks within the planned urban area. These works better facilitates cross connections to the adjacent stages' roading network, and will maximise public access connections to and along the ecological corridors alongside Milldale Stream.

The removal of wetlands and diversion of streams is considered as a critical necessity in order to allow for the overall urban development for the following reasons:

3.8.3.1 Landform

As discussed within the Functional Need Memo in **Appendix 2U**, the topography across Stages 10-13 is the steepest topography within the entire Milldale development. This presents a significant constraint when designing compliant road gradients and level building platforms for future urban development. In order to achieve these key objectives, the proposed roading has largely been designed to run parallel with the contours of the site (rather than running against the contours), and to incorporate retaining walls and RE Slopes to absorb the height differentials between the proposed lots.

A further consideration into the design of the proposed roading network includes 147 Argent Lane, a sizeable site located centrally between Stages 11 and 12. This site is not owned by FHLD, and the site has no current plans for development. The potential future development of this site has been taken into account when designing the northern and western elevations of this site. Retaining walls along these boundaries have been minimised where possible, whilst still maintaining the necessary levels to achieve compliant road gradients. Furthermore, infrastructure connections have been enabled to this site, with road frontage proposed to Argent Lane, along with 4 additional road connections within Stages 12 and 13.

Stages 10-13 traverses across a range of landforms and elevations with the natural hill-top along Cemetery Road Link and Wainui Road at 72m – 82m RL and Milldale Stream at 48m RL at the lowest point. There is a design objective to maintain the top of the natural hill as a key feature of the boundary and to retain and enhance Milldale Stream as part of the Stages 10-13 works.

There are fixed levels surrounding the Stages 10-13 project area with the completed stages of Milldale (discussed in more detail below). The design has been optimised to tie into these level constraints whilst creating suitable road gradients and build platforms for residential and commercial activities.

3.8.3.2 Geotechnical Considerations

As identified within the Geotechnical Report in **Appendix 2A**, Stages 10-13 are underlain by the less than favourable Northland Allochthon geology along with boundary constraints whereby the steep gradients of the site are fixed. Furthermore, there are frequent watercourses and wetlands identified across the site that pose significant constraints to the success of slope stability remediation for the proposed urban development.

In order to achieve the proposed urban development across the subject site, the development is dependent on the ability to construct a universal, cohesive and large-scale remediation. This involves the removal of the wetlands and realignment of the upper reaches of the intermittent streams. The Geotech report highlights that the installation of underfill drainage for the selected reclaimed and diverted intermittent streams, and engineered fill across the site (and within the wetlands) significantly benefits the global stability of the slopes by providing confining loads with improved shear resistance. The water that is captured by the proposed drainage is directed into the more appropriately located diverted streams as a form of stream recharge.

Slope stability is essential for well-conditioned and safe residential development and cannot be undertaken in isolation in and around the existing natural features. In order to achieve global site

stability, the majority of the site needs to be fully earthworked which results in the loss of wetlands and diversion of streams. This allows for opportunities to realign the key streams into locations that will better integrate with the urban structure of the Precinct Plan.

3.8.3.3 Stormwater and Stream Retention/Hydrology Requirements

The masterplan for Milldale, as set out in the approved SMP for the wider Milldale catchment, was approved on the basis of 'at-source' stormwater detention devices within the road reserves in the form of rain gardens. At the time, Council was opposed to centralised detention. Throughout the development of previous stages of Milldale, Councils directive has evolved, where rain gardens are now strongly opposed, and the preference is now on the developer to provide centralised stormwater management systems.

Stages 10-13 have been designed to accommodate the latest directive, which involves several large stormwater detention devices being provided throughout the site. In order to maintain and enhance the retained streams within the site, the realigned intermittent streams will channel all overland flows to the Milldale Stream catchment. This provides for stream recharge, and ongoing retention of the stream habitat.

The vertical realignment of these intermittent streams ensure compliant road gradients, manage overall steepness challenges across the site, and are considered necessary to soften the steeper slopes around the headwaters of the retained streams.

3.8.3.4 Precinct Plan Conformance and Approved Roading Connections

The development has been designed to align with the Wainui Precinct Plan while addressing the site's physical constraints. The layout of Stages 10-13 integrates the key connections required by the Precinct Plan with the existing streams, which were not originally identified for retention in the Plan.

The proposal maintains the collector road network as specified in the Precinct Plan, with one necessary modification in Stage 13. Here, the steep topography prevents the construction of a collector road that would meet the required 8% maximum gradient. As a result, the design incorporates a local road connection that maintains the intended transport link. This modification was presented at the pre-application meeting with Council with no major concerns raised by attendees.

The development implements the open space corridor and stream edge roads along Milldale Stream, with provisions for these elements at the eastern boundary of Stage 12 adjacent to 147 Argent Lane. The main active transport corridor extends through Stage 11 to Wainui Road, completing this component of the Precinct Plan network.

3.8.3.5 Urban Design

As discussed within the Urban Design Report in Appendix 2L, the development layout responds to the site's steep topography through a carefully considered block configuration. In Stages 12 and 13, wider curve patterns follow the natural contours, balancing earthworks requirements while maintaining a coherent urban form. This approach has determined specific parameters for the subdivision design.

The removal of wetlands in certain areas enables a block structure that aligns with both the existing pattern of Stages 10-13 and the broader Milldale development. Retaining these wetlands would

have necessitated multiple curve-linear road sections that would diverge from the established urban pattern of the area. Without these visual and physical connections, the overall legibility and permeability for urban navigation capabilities will be highly compromised.

The subdivision implements a grid-based layout that connects with the existing street network. This pattern aligns with the Precinct Plan requirements and creates a clear movement network that integrates with the surrounding development areas.

3.8.3.6 Earthworks Design Rationale Summary

Accordingly, the design rationale to justify the reclamation of 16 wetlands and 1,028.5m of stream extents include:

- Improved geotechnical stability and landform;
- Maximisation of public access to ecological corridors and the wider open space network;
- Continued connection of stream edge road and central local road in accordance with the Precinct Plan;
- Regular block structure and interconnected road network;
- Roads, pathways and cycleways constructed to the recommended gradients and to promote walking and active transport modes such as cycling;
- Creating a cohesive urban greenfield development aligned with the planned master planned Milldale development; and
- The creation of public infrastructure in a resilient and efficient manner that minimises public expenditure and maintenance costs in the future.

3.8.4 Mitigation of Adverse Ecological Effects

The approach to ecological effects mitigation is described in the EIA in **Appendix 2C**. This comprises the following:

- The preparation and implementation of an Erosion and Sediment Control Plan in accordance with Council's GD05 design guidelines to prevent the mobilisation of sediments into nearby waterways;
- Prepare and implement a Bat Management Plan (**BMP**)[35] and a Lizards Management Plan (**LMP**)[36] for indigenous lizards, both by qualified professionals. These plans will be in the form of a Fauna Management Plan (**FMP**). A draft version of the FMP is included within the EIA within **Appendix 2C**;
- Prior to streamworks, submit a Native Fish Capture and Relocation Plan (**NFCRP**) by a qualified freshwater ecologist to protect indigenous fish species[37];
- Develop and execute a stream and wetland planting and management plan, including monitoring for successful establishment and ongoing maintenance of wetland areas. A draft

[35] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks During-Construction Conditions
[36] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.2, Siteworks During-Construction Conditions
[37] Volume 6: Milldale Stages 10-13, 4C and WWTP Proposed Conditions, Section 2.3, General

Stream and Wetland Planting Management Plan has been included within the Offset Planting Plans prepared by BECA in **Appendix 2Q**; and

- A wetland monitoring plan is prepared and implemented as a condition of consent to ensure the successful establishment of the proposed offset wetland. This plan should include recommendations for vegetation and hydrological monitoring. A draft Wetland Monitoring Plan has been provided within the EIA in **Appendix 2C**.

In addition to the mitigation measures above, the proposal also involves ecological compensation at an off-site location (but within the same ecological district) to address residual adverse effects resulting from the removal of the streams and wetlands described above. Refer to Section 3.9 of this AEE report below.

3.8.5 Effects Threshold

There is currently no standard or accepted approach for assessing an appropriate multiplier for the loss of wetland values.

An equivalent version of the Stream Ecological Value (**SEV**) offsetting tool (which has been utilised for this project) has been developed by RMA Ecology in conjunction with Auckland Council being the Wetland Ecological Valuation (**WEV**) method. WEV has been applied in a project in Drury West that reclaimed wetland areas of similar scale and degradation. The WEV method has also been accepted by Auckland Council in another project within the wilder Milldale development in 2021 (Council ref: BUN60366520). Accordingly, it is considered that the WEV method is applicable to this project.

The approach proposed for balancing the loss of values from removing the 16 wetlands and 1,028m of streams is discussed further below, including the programme to restore and create new wetlands and extensive enhancement riparian planting within the offsite location owned by the applicant in Milldale North.

3.9 Wetland Enhancement and Stream Restoration Planting at Milldale North Offset Site

This section is included to assist the panel in their understanding of the proposed wetland enhancement and stream restoration planting as part of the compensation project to ensure there is no net-loss of wetlands and stream extents as a result of the proposal.

3.9.1 Overview

As a result of wetland reclamation and stream reclamation and diversion, there will still be a residual loss of wetland and stream extent as well as ecological values that the proposed offset project at 231 & 173 Upper Orewa Road (the Milldale North site) addresses to a minimum no-net loss level.

Consideration was given to appropriate mitigation for the ecological values lost through the reclamation of the 16 wetlands and 1,028.5m length of streams within the site as detailed in the EIA in **Appendix 2C**. However, there are no other wetlands or suitable areas within the extent of the site to enhance or create wetlands. Furthermore, creating stream extent is difficult given the development proposed. Accordingly, the offset and compensation is required to be located off site. A suitable offset site approximately 1.4 km to the north within the Milldale rural block ('**Offset**

site') has been identified. The impact and offset sites are located within the wider Ōrewa River catchment.

The offset site at 173 and 231 Upper Orewa Road is owned by the applicant and is located within a rural zone.

To maximise the effectiveness of restoration efforts, a catchment-wide approach was intentionally adopted for the offset and compensation measures within the offset site. This approach provides significantly greater benefits than isolated, scattered efforts, leading to more effective and sustainable environmental improvements. Many freshwater issues originate upstream, such as erosion, pollution, and altered flow regimes. By addressing these underlying causes rather than just treating localised symptoms, catchment-wide restoration enhances water availability, reduces flood risks, and improves overall ecosystem health. Additionally, it minimises edge effects, fosters the development of ecotones, and strengthens connectivity between terrestrial and freshwater habitats, ultimately supporting greater biodiversity.

To offset and compensate for the loss of 16 wetlands of 2.02 ha in size and 1,028m (402.3m²) of intermittent stream extent, a total of 598.8m² of stream extent and 2.81 ha of wetland will be restored or enhanced, and five culverts will be daylighted within the offset site.

Although there will be an overall net loss of intermittent stream extent, the proposed offset and compensation would restore or enhance ecosystem processes equivalent to or greater than those lost. This includes improvements in water quality, habitat diversity, biodiversity support, and hydrological stability.

3.9.2 Description of the Proposed Offset and Compensation Package

As detailed within the EIA in Appendix 2C, there are existing wetlands and streams located within Milldale North which are currently degraded and not cohesive. As part of the offset and compensation package, it is proposed to create a cohesive wetland area and enhance the ecological values of the site through extensive enhancement planting within riparian margins of existing degraded streams across the three catchments within the offset site. The catchment selected for this offset and compensation project runs directly into the Orewa River to the south. The area of catchment identified is identified in Figure 15 below.

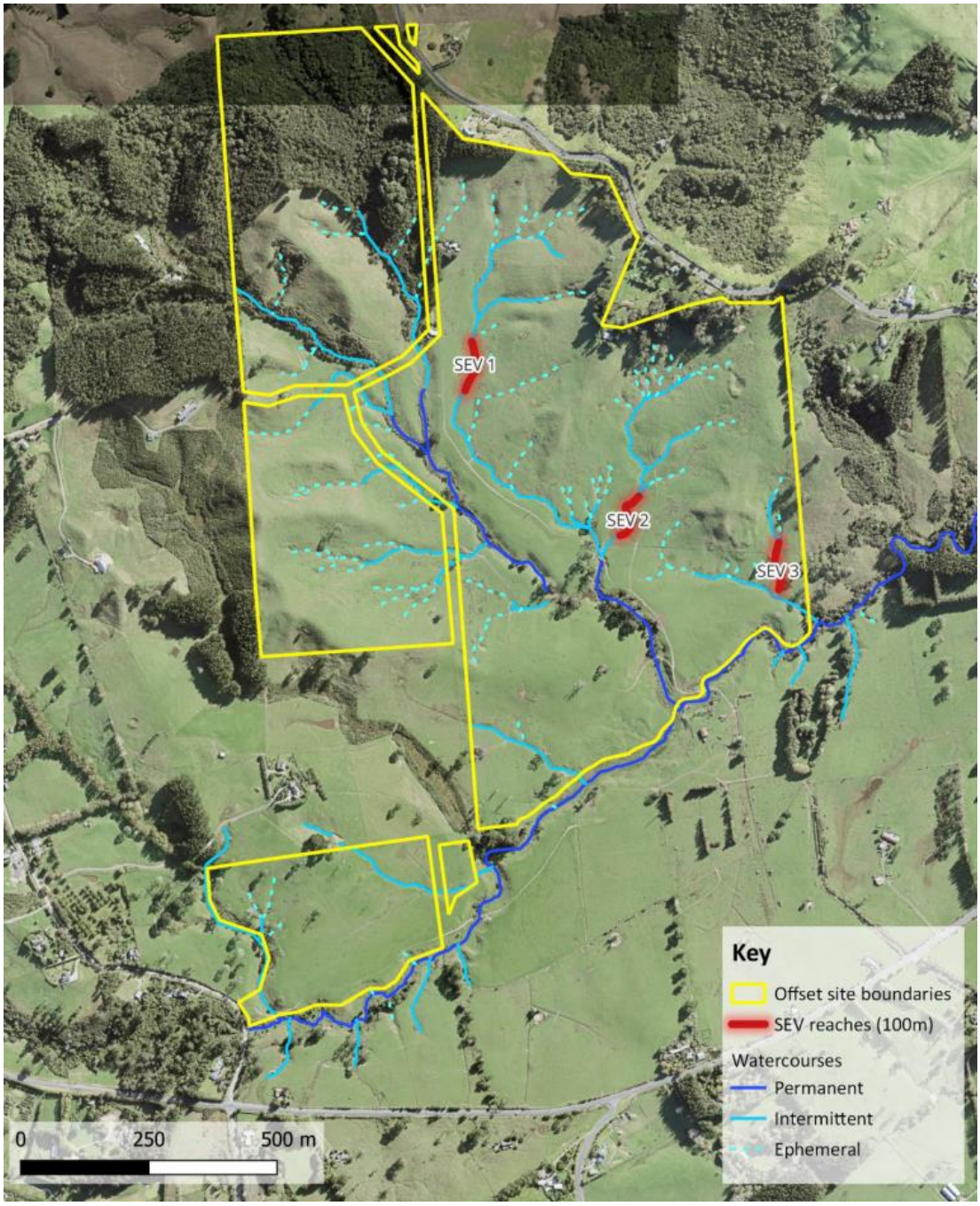

Figure 15: Offset Site Catchments

The new wetland to be created will total an area of 2.81 ha along with 10m riparian planting totalling 598.8m² around the remaining streams in Catchment 1, 2 and 3. Five farm culverts are also proposed to be daylighted. The wetland and planting areas will be fenced and protected by way of a covenant registered on the record of title. Conservation planting associated with the stream and wetland enhancement works at the offset site is a permitted activity.

3.9.3 Methodology for Implementation

The proposed works will involve the creation of new wetlands and extensive restoration stream planting at the offset site. The site is a sloping site with slow permeable soils and portions of the site have been successfully utilised for compensation works in previous stages.

3.9.3.1 Bunds

As identified in the WWLA Memo entitled Milldale – Wetland Offsetting Proposal (**Appendix 2V**), the fundamental premise of the selected site for wetland offsetting is that the selected area is not currently a wetland, but with some intervention and enhancement, could be a wetland due to the existing poorly drained soils.

The enhancement methodology, as detailed within **Appendix 2V**, is detailed below.

Due to the sloping nature of the site with slow permeability soils, a series of shallow bunds will act as barriers to surface water runoff when positioned across the water's pathway. The bunds detain surface runoff, sediment and contaminants from flowing downstream. Runoff held back by the bund will slowly seep into the ground created a more saturated environment.

A series of 27 smalls ground enhancement bunds are planned at roughly 10m intervals from uphill to downhill. Each bund follows the natural contour of the slope with each end 'flicking' uphill to prevent water from flowing around. To construct the bunds, excavation of a small swale following the natural contour of the slope, with a maximum depth of approximately 0.3m and swale width of up to approximately 2m. The material removed to create the swale would then be used to raise the ground level for the bund, minimising the work involved.

The series of ground enhancement bunds will help establish the wetland environment on the offset site. The bunds will reduce surface runoff by retaining some stormwater during rainfall. This water will percolate into the soils and maintain the wetland, noting that the area is surrounded by wetland and has low permeability soils. Coupled with the vegetation offset and fencing out of stock (as detailed below) the proposal will, in the opinion of WWLA, provide excellent ground conditions for a wetland habitat will thrive in this area.

3.9.3.2 Fencing

As detailed in the Milldale North wetland offset planting plan prepared by Beca in **Appendix 2Q**, the entire 2.81 ha wetland offset site will be delineated from the surrounding paddock with a stock proof fence.

3.9.3.3 Planting

The planting plan prepared by Beca is indicated in **Figure 16** below and is appended in **Appendix 2Q**. This includes a range of wetland enrichment planting, wetland new planting (offset), wetland fringe planting, landscape restoration planting, ridge line tree planting, and low terrace tree planting. A full plant schedule is included to **Appendix 2Q**.

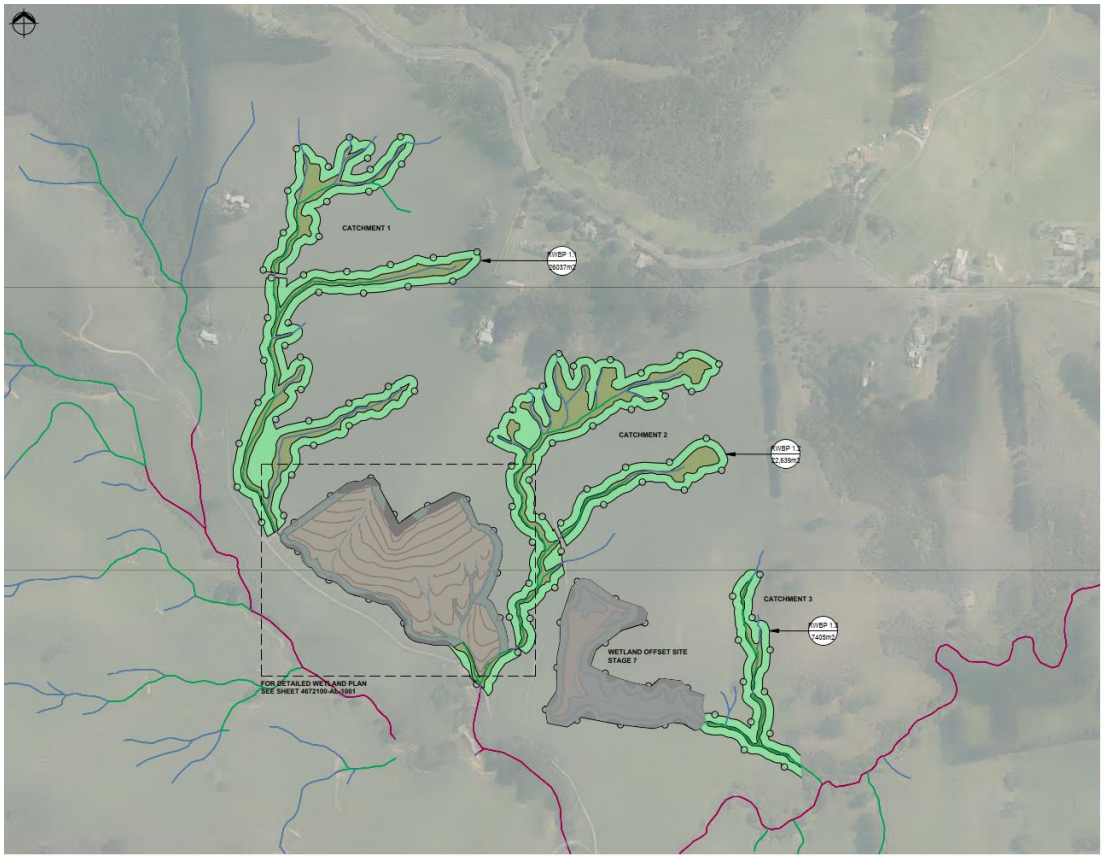

Figure 16: Offset Site Planting Proposed

3.9.3.4 Proposed Covenant Area

Following the completion of the offset and compensation project in Milldale North, a land covenant will be prepared under Section 108(2)(d) of the RMA covering the legal protection and on-going maintenance of the wetland planting and will be registered on the record of title of Part Allot 74 Parish of Waiwera.

3.10 Summary of Monitoring and Mitigation Measures

In accordance with clause 6(1)(d) and (g) of Schedule 5 of the FTAA, a detailed list of mitigation measures incorporating both management plans and monitoring measures has been provided within **Volume 1** (Section 8.8 and corresponding **Appendix 1I**).

3.11 Any other Activities

This section is provided in accordance with clause 5(1)(e) of Schedule 5 of the FTAA.

There are no other activities that are part of the proposal to which the consent application relates.

3.12 Other Approvals Required

This section is provided in accordance with clause 5(1)(f) of Schedule 5 of the FTAA.

There are no other approvals required as part of the Milldale Stages 10-13 development, noting that the Authority to Modify is addressed in **Volume 5**.

3.13 Proposed Consent Conditions

In accordance with clause 5(1)(k) of Schedule 5 of the FTAA, the proposed conditions of this consent are provided as **Volume 6**.

4.0 Reasons for Consent

In accordance with section 42(4)(a) the application is seeking approval for a resource consent that would otherwise be applied for under the RMA. In accordance with Schedule 5, Clause 5(5)(a) there are also permitted activities associated with the application.

Consent is required under the provisions of AUP(OP), NES-FM and NES-CS as summarised below along with the associated permitted activities. A full Activities and Standards Assessment is included in **Appendix 2W.**

Overall, the application requires assessment as a **non-complying activity**.

4.1 Auckland Unitary Plan (Operative in Part)

4.1.1 Land Use Consent (s9)

4.1.1.1 E11 Land Disturbance – Regional

- The proposal involves earthworks greater than 50,000m² where land has a slope less than 10 degrees outside the Sediment Control Protection Area. This requires consent as a restricted discretionary activity under rule E11.4.1(A5).
- The proposal involves earthworks greater than 2,500m² (with approximately 40.17 ha proposed) in the residential zone and open space zone where the land has a slope equal to or greater than 10 degrees. This requires consent as a restricted discretionary activity under rule E11.4.1(A8).
- The proposal involves earthworks greater than 2,500m² (with approximately 27.8 ha proposed) within the sediment control protection area. This requires consent as a restricted discretionary activity under rule E11.4.1(A9).

4.1.1.2 E12 Land Disturbance – District

- The proposal involves earthworks greater than 2,500m² (with approximately 68 ha proposed) in the residential zone, business zone and open space zones. This requires consent as a restricted discretionary activity under rule E12.4.1(A6).
- The proposal involves earthworks greater than 2,500m² (with approximately 2 ha proposed) in the future urban zone for a temporary stockpile. This requires consent as a restricted discretionary activity under rule E12.4.1(A6).
- The proposal involves earthworks greater than 2,500m³ (with approximately 734,100 m³ cut and 950,000m³ fill proposed) in the residential and open space zones. This requires consent as a restricted discretionary activity under rule E12.4.1(A10).

- The proposal involves earthworks within riparian yards of over 5m² or 5m³ (approximately 4,144m³ cut and 200,962m³ fill over an area of 6.58 ha). This requires consent as a restricted discretionary activity under rules E12.6.2(1) and C1.9(2).
- The proposal involves earthworks (including filling) within a 100-year annual exceedance probability (AEP) flood plain that more than 300mm and fill volume more than 10m³. This requires consent as a restricted discretionary activity under rules E12.6.2(11) and C1.9(2).
- The proposal involves earthworks within overland flow paths which will divert the entry points of the flow paths. This requires consent as a restricted discretionary activity under rules E12.6.2(12) and C1.9(2).

4.1.1.3 E15 Vegetation Management and Biodiversity

- The proposal involves vegetation removal within 20m of a natural wetland. This requires consent as a restricted discretionary activity under rule E15.4.1(A18).
- The proposal involves vegetation removal within 10m of an urban stream (Streams 2, 6, 8, 9, 12, 15, 18, 20, 21, 25, 26, 27, 35, 36, 42 and 43). This requires consent as a restricted discretionary activity under rule E15.4.1(A19).
- The proposal involves vegetation removal within 20m of a natural wetland, in the bed of a river or stream or lake. This requires consent as a restricted discretionary activity under rule E15.4.1(A20).

4.1.1.4 E16 Trees in Open Space Zones

- The proposal involves works within the Protected Root Zone of two trees within the open space zone not complying with standards E16.6.2.2(a)(i) - (iii). This requires consent as a restricted discretionary activity under rule E16.4.1(A8).
- The proposal involves tree removal of trees greater than 4m in height or greater than 400mm in girth in the Open Space Zone. This requires consent as a restricted discretionary activity under rule E16.4.1(A10).

4.1.1.5 E17 Trees in Roads

- The proposal involves removal of trees that are greater than 4m in height or greater than 400m in girth in the road reserve. This requires consent as a restricted discretionary activity under rule E17.4.1(A10).

4.1.1.6 E26 Infrastructure

- The proposal involves the construction of a booster pump water supply station not complying with standards E26.2.5.2(2)(a) and E26.2.5.2(3)(a). This requires consent as a controlled activity under rule E26.2.3.1(A51A).
- The proposal involves the construction of stormwater basins. This requires consent as a controlled activity under rule E26.2.3.1(A55).
- The proposal involves the construction of an unformed road (Cemetery Road Link) and associated retaining walls. This requires consent as a restricted discretionary activity under rule E26.2.3.2(A69).

- The proposal involves the alteration or removal trees in the road reserve greater than 4m in height or 400mm in girth. This requires consent as a restricted discretionary activity under rule E26.3.3.1(A92).
- The proposal involves general earthworks greater than 2,500m² and 2,500m³ in a road, and are earthworks other than for maintenance, repair, renewal or minor infrastructure upgrade. The requires consent as a restricted discretionary activity under rules E26.5.3.1(A97) and (A97A) respectively.
- The proposal involves earthworks greater than 2,500m² in a road where the land has a slope equal to or greater than 10 degrees other than for maintenance, repair, renewal or minor infrastructure upgrade. This requires consent as a restricted discretionary activity under rule E26.5.3.2(A106).
- The proposal involves earthworks within the Sediment Control Protection Area greater than 2,500m² in a road other than for maintenance, repair, renewal or minor infrastructure upgrade. This requires consent as a restricted discretionary activity under rule E26.5.3.2(A107).

4.1.1.7 E27 Transport

- The proposed vehicle crossing on Lot 474 will exceed the permitted width of 3m for residential sites with 1 or 2 parking spaces by providing a vehicle crossing of 5m. This requires consent as a restricted discretionary activity under rule E27.4.1(A2).
- The proposed subdivision exceeds the trip generation standards set out in Standard E27.6.1(a), as the proposed development will have the capacity to accommodate more than 100 dwellings. This requires consent as a restricted discretionary activity under rule E27.4.1(A3).

4.1.1.8 E36 Natural Hazards and Flooding

- The proposal involves construction of new structures (culverts) within the 1% AEP. This requires consent as a restricted discretionary activity under rule E36.4.1(A37).
- The development will result in the diversion of overland flow paths. This requires consent as a restricted discretionary activity under rule E36.4.1(A41).
- The proposal includes retaining walls adjacent to the proposed culverts. Any buildings or structures, including retaining walls located within or over an overland flow path requires consent as a restricted discretionary activity under rule E36.4.3(A42).

4.1.1.9 H3 Residential – Single House Zone

- The proposal involves buildings which do not comply with the following standards and requires consent as a restricted discretionary activity under rules C1.9(2) and H3.4.1(A34):
    - H3.6.8 Yards: Retaining walls are proposed within the front yard of lots (which are considered to be 'buildings' under the AUP(OP).
        - Lot 213 / Wall 5 – retaining over 24.4m varying between 0m to 3m in height is proposed within the front yard.
- The establishment of combined retaining walls and 1.2m high fencing located within the front, side, and rear yards above the permitted maximum height of 1.4m within the front yard or 2m

in the side/rear yard. This requires consent as a restricted discretionary activity under rules H3.6.12 and C1.9(2).

4.1.1.10 H4 Residential – Mixed Housing Suburban

- The proposal involves buildings which do not comply with the following standards and requires consent as a restricted discretionary activity under rules C1.9(2) and H4.4.1(A31):
    - H4.6.7 Yards: Retaining walls are proposed within the front yard of lots (which are considered to be 'buildings' under the AUP(OP):
        - Lot 5 / Wall 1 – retaining over 1.5m varying between 0m to 1m in height is proposed within the front yard.
        - Lot 20 / Wall 2 – retaining over 31.35m varying between 0m to 2m in height is proposed within the front yard.
        - Lot 25 / Wall 2 – retaining over 4.2m varying between 0m to 1m in height is proposed within the front yard.
        - Lot 193, 4011 and 198 / Wall 3 – retaining over 51.6m varying between 0m to 1m in height is proposed within the front yard.
        - Lot 188 and 4010 / Wall 4 – retaining over 51.6m varying between 0m to 1m in height is proposed within the front yard.
        - Lot 203 / Wall 5 – retaining over 23m varying between 0m to 2.5m in height is proposed within the front yard.
        - Lot 213 / Wall 5 – retaining over 24.4m varying between 0m to 3m in height is proposed within the front yard.
        - Lot 239 / Wall 6 – retaining over 22.5m varying between 0m to 2m in height is proposed within the front yard.
        - Lot 273 / Wall 7– retaining over 22.5m varying between 0m to 2m in height is proposed within the front yard.
        - Lot 448 / Wall 12 – retaining over 22.7m varying between 0 to 2.5m in height is proposed within the front yard.
        - Lot 405 / Wall 15 – retaining over 17.3m varying between 0 to 2.5m in height is proposed within the front yard.
        - Lot 404 / Wall 16 – retaining over 15.9m varying between 0 to 2.5m in height is proposed within the front yard.
        - Lot 403 / Wall 17 – retaining over 17.9m varying between 0 to 2m in height is proposed within the front yard.
        - Lot 441 / Wall 18 – retaining over 24.9m varying between 0 to 2m in height is proposed within the front yard.
        - Lot 447 / Wall 18 – retaining over 22.7m varying between 0 to 3m in height is proposed within the front yard.

- Lot 468 / Wall 18 – retaining over 27m varying between 0 to 2.5m in height is proposed within the front yard.
- Lot 556 / Wall 21 – retaining over 1.5m varying between 0 to 1m in height is proposed within the front yard.
- Lot 567 / Wall 22 – retaining over 22.5m varying between 0 to 1m in height is proposed within the front yard.

- The establishment of combined retaining walls and 1.2m high fencing located within the front, side and rear yards within the lots noted above, is above the permitted maximum height of 2m. This requires consent as a restricted discretionary activity under rules H4.6.14 and C1.9(2).

4.1.1.11 H5 Residential – Mixed Housing Urban Zone

- The proposal involves buildings which do not comply with the following standards and requires consent as a restricted discretionary activity under rules C1.9(2) and H3.4.1(A31):
  - H5.6.8 Yards: Retaining walls are proposed within the front yard of lots (which are considered to be 'buildings' under the AUP(OP).
    - Lot 281 / Wall 7 – retaining over 22.5m varying between 0m to 3m in height is proposed within the front yard.
    - Lot 266 / Wall 8 – retaining over 25.8m varying between 0m to 1.5m in height is proposed within the front yard.
    - Lot 1022 / Wall 9 – retaining over 106.4m varying between 0m to 2m in height is proposed within the front yard.
    - Lot 317 / Wall 10 – retaining over 23.7m varying between 0m to 2m in height is proposed within the front yard.
    - Lot 322 / Wall 10 – retaining over 28.5m varying between 0m to 3m in height is proposed within the front yard.
    - Lot 497 / Wall 11 – retaining over 1.5m varying between 0m to 1m in height is proposed within the front yard.
    - Lot 448 / Wall 12 – retaining over 22.7m varying between 0m to 2.5m in height is proposed within the front yard.
    - Lot 454 / Wall 12 – retaining over 22.6m varying between 0m to 1m in height is proposed within the front yard.
    - Lot 475 / Wall 13 – retaining over 23.9m varying between 0m to 2m in height is proposed within the front yard.
    - Lot 1024, 1025, 4018 and 4019 / Wall 14 – retaining over 173m varying between 0m to 2.5m in height is proposed within the front yard.
    - Lot 468 / Wall 19 – retaining over 27m varying between 0m to 2.5m in height is proposed within the front yard.
    - Lot 471 / Wall 19 – retaining over 23.8m varying between 0m to 2m in height is proposed within the front yard.

- Lot 472 / Wall 20 – retaining over 31.1m varying between 0m to 2m in height is proposed within the front yard.
- Lot 473 / Wall 20 – retaining over 18.3m varying between 0m to 1.5m in height is proposed within the front yard.
- Lot 556 / Wall 21 – retaining over 1.5m varying between 0m to 1m in height is proposed within the front yard.

  - H5.6.11 Landscaped Area: A landscaped area of 33.6% or 146.3m² is proposed on Lot 474 for the establishment of a Booster Pump Station where 35%/152m² is required.

- The establishment of combined retaining wall and 1.2m high fencing located within the rear yard above the permitted maximum height of 2m. This requires consent as a restricted discretionary activity under rules H5.6.15 and C1.9(2).

4.1.1.12 H7 Open Space Zones

- The proposal involves buildings which do not comply with the following standards and require consent as a discretionary activity under rules C1.9(2) and H7.9.1(A39):

  - H7.11.3 Yards: Retaining walls are proposed within the front yard of lots (which are considered to be 'buildings' under the AUP(OP).
    - Lot 281 / Wall 7 – retaining over 22.5m varying between 0m to 3m in height is proposed within the front yard.
    - Lot 482 / Wall 13 – retaining over 27.9m varying between 0m to 2m in height is proposed within the front yard.
    - Lot 1024, 1025, 4018 and 4019 / Wall 14 – retaining over 173m varying between 0m to 2.5m in height is proposed within the front yard.

4.1.1.13 E40 Temporary Activities

- The proposal involves earthworks that will exceed a construction duration of 24 months. This requires consent as a restricted discretionary activity under rule E40.4.1(A24).

4.1.2 Blanket Consents – Land Use (s9)

4.1.2.1 Wainui Precinct

- Blanket land use consent is sought for building and development in general accordance with Rule I544.10.1 Wainui Precinct Plan 1. This requires consent as a restricted discretionary activity under rule I544.10.1(A2).

4.1.2.2 Building Coverage on all lots

- Blanket land use consent is sought to enable buildings with a maximum building coverage of 50% on all lots in the Mixed Housing Urban zone. This requires consents as a restricted discretionary activity under rule C1.2(2) and H5.6.10.

4.1.2.3 Split Zoned Lots

- Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Suburban zone standards on those parts of Lots 40-44, 69-76, 101-105, 118-123, 136-138, 158, 172, 186-187, 191-192, 209-213, 215-216, 240, 242-248, 292-294, 302-305, 383-399, 570-573 & 580-

582 that are split zoned Residential Single House Zone / Residential - Mixed Housing Suburban Zone. This requires consent as a discretionary activity under rule C1.7(1).

- Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Suburban zone standards on those parts of Lots 1, 8, 1001-1003 & 1006 that are split zoned Residential - Mixed Housing Suburban Zone / Open Space – Conservation Zone. This requires consent as a discretionary activity under rule C1.7(1).
- Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Suburban zone standards on those parts of Lot 263-265 & 462 that are split zoned Residential - Mixed Housing Suburban Zone / Residential – Mixed Housing Urban. This requires consent as a discretionary activity under rule C1.7(1).
- Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Urban zone standards on those parts of Lots 275, 306-309, 315-316, 424-430, 448, 468-470, 533-539 & 555-560 that are split zoned Residential - Mixed Housing Suburban Zone / Residential – Mixed Housing Urban. This requires consent as a discretionary activity under rule C1.7(1).
- Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Urban zone standards on those parts of Lots 281, 455-457, 478-479, 483-486 & 1025 that are split zoned Residential - Mixed Housing Urban Zone / Open Space – Conservation Zone. This requires consent as a discretionary activity under rule C1.7(1).
- Blanket land use consent is sought to exclusively apply Residential - Mixed Housing Urban zone standards on those parts of Lots 1026 and 486-492 that are split zoned Residential - Mixed Housing Urban Zone / Business – Neighbourhood Centre Zone. This requires consent as a discretionary activity under rule C1.7(1).
- Blanket consent is sought to construct dwellings / buildings on Lots 1026, 486-492 that infringe the following Neighbourhood Centre Zone core standards as a restricted discretionary activity under rule C1.9(2):
    - H12.6.3 – Residential at ground floor (i.e. to permit residential at ground floor);
    - H12.6.4 – 3m side and rear yards (i.e. to permit buildings to be setback 1m from the side and rear boundaries).

4.1.2.4 Height in Relation to Boundary

- Blanket land use consent is sought to apply the height in relation to boundary standard to new development from the top of the proposed retaining walls and not the approved ground level at the time of subdivision. This requires consent as a discretionary activity under rule C1.7(1). This applies to Lots 2-5, 20-25, 188, 193, 198, 203-216, 237-239, 273-281, 266-272, 1022, 317-322, 403-405, 441-454, 468-471, 472-473, 497-502, 475-482, 556-560, 567-573 & 1024-1025.

4.1.2.5 Residential Single House Zone

- Blanket use consent is sought to construct more than one residential building within Residential – Single House Zone on Lots 1007-1013, 1017-1021 and 1027. This is an activity that is not provided for. This requires consent as a non-complying activity under rule H3.4.1(A1).

- Blanket land use consent is sought for new residential buildings that do not comply with the following Residential – Single House Zone standards on Lots 1007-1013, 1017-1021 and 1027. This requires consent as a restricted discretionary activity under rules H3.4.1(A6) and C1.9(2):

Rule Reference	SHZ Standard	Residential Design Outcomes and Control Standards Proposed
H3.6.6 – Height	**Infringe.** 8.0m	Maximum height of 11m is proposed, except 50% of a buildings roof in elevation may exceed this height by 1m where the entire roof slopes 15 degrees of more.
H3.6.7 – HIRB	**Infringe.** 2.5m + 45°	3m + 45° proposed.
H3.6.10 – Building Coverage	**Infringe.** 35%	50% proposed.
H3.6.11 – Landscaped Area	**Infringe.** 40%	35% proposed.

- Blanket use consent is sought on Lot 1050 (Single House Zone) to enable building(s) and activities compliant with the listed permitted activities and standards stated within H12.4 and H12.6 respectively of the Neighbourhood Centre Zone. This requires consent as a non-complying activity under rule H3.4.1(A1).
- Blanket land use consent is sought for new buildings that do not comply with the following Residential – Single House Zone standards on Lot 1050. This requires consent as a restricted discretionary activity under rules H3.4.1(A36) and C1.9(2):

Rule Reference	SHZ Standard	NCZ Standard Proposed
H3.6.6 – Height	**Infringes.** 8m	Occupiable building height: 11m Height for roof form: 2m Total Building height: 13m
H3.6.8 – Yards	**Infringe.** Front Yard 3m	No control proposed for buildings within the front yard
H3.6.9 – Maximum Impervious Area	**Infringe.** 60%	No maximum impervious area control.
H3.6.10 – Building Coverage	**Infringe.** 35%	No maximum building coverage area proposed.

H3.6.11 – Landscaped Area	**Infringe.** 40%	No minimum landscaped area proposed.

- Blanket land use consent is sought for new residential buildings that do not comply with the following Residential – Single House Zone standards on Lots 37-39, 100, 139-141, 173-185, 189-190, 214, 217-220, 249-250, 295-298, 357-375, 574-579 & 583-588. This requires consent as a restricted discretionary under rules H3.4.1(A36) and C1.9(2):

Rule Reference	SHZ Standard	MHS Proposed Standard
H3.6.10 – Building Coverage	**Infringe.** 35%	40% proposed.

4.1.2.6 Residential Mixed Housing Suburban

- Blanket use consent is sought to construct four or more residential buildings within Residential – Mixed Housing Suburban Zone on Lots 1017 and 1018. This requires consent as a restricted discretionary activity under rule H4.4.1(A4).
- Blanket land use consent is sought for new residential buildings that do not comply with the following Residential – Mixed Housing Suburban zone standards on Lots 1017 & 1018. This requires consent as a restricted discretionary under rules H4.4.1(A34) and C1.9(2):

Rule Reference	MHS Standard	Residential Design Outcomes and Control Standards Proposed
H4.6.4 – Height	**Infringe.** 8.0m	Maximum height of 11m is proposed, except 50% of a buildings roof in elevation may exceed this height by 1m where the entire roof slopes 15 degrees of more.
H4.6.5 – HIRB	**Infringe.** 2.5m + 45°	3m + 45° proposed.
H4.6.9 – Building Coverage	**Infringe.** 40%	50% proposed.
H4.6.10 – Landscaped Area	**Infringe.** 40%	35% proposed.

- Blanket land use consent is sought for new residential buildings that do not comply with the following Residential – Mixed Housing Suburban zone standards on Lots 275, 306-311, 315-316, 424-431, 448, 468-470, 533-539 and 555-560. This requires consent as a restricted discretionary under rules H4.4.1(A34) and C1.9(2):

Rule Reference	MHS Standard	MHU Proposed Standard
H4.6.4 – Height	**Infringe.** 8.0m	Maximum height of 11m is proposed, except 50% of a buildings roof in elevation may exceed this height by 1m where the entire roof slopes 15 degrees of more.
H4.6.5 – HIRB	**Infringe.** 2.5m + 45°	3m + 45° proposed.
H4.6.7 – Yards	**Infringe.** Front yard 3m, side yard 1m, rear yard 1m	Front yard 2.5m, side yard 1.0m, rear yard 1.0m.
H4.6.9 – Building Coverage	**Infringe.** 40%	50% proposed.
H4.6.10 – Landscaped Area	**Infringe.** 40%	35% proposed.

4.1.2.7 Open Space Zone

- Blanket land use consent is sought to construct new residential buildings within the Open Space zone on Lots 1001-1003, 1006, 1024, 1025, 1, 8, 281, 455-457 & 478-486, an activity not provided for. This requires consent as a non-complying activity under rule H7.9.1(A1).
- Blanket land use consent is sought to construct new buildings within the Open Space zone on Lots 1024, 1025, 281, 455-457, 478-486 that do not comply with one or more standards. This requires consent as a discretionary activity under rules H7.9.1(A39) and C1.9(2).

Rule Reference	OSC Standard	MHU Proposed Standard
H7.11.1 – Height	**Infringe.** 4.0m	Maximum height of 11m is proposed, except 50% of a buildings roof in elevation may exceed this height by 1m where the entire roof slopes 15 degrees of more.
H7.11.2 – HIRB		No infringement to standard proposed.
H7.11.3 – Yards	**Infringe.** Front yard 5m, side yard 6.0m, rear yard 6.0m	Front yard 2.5m, side yard 1.0m, rear yard 1.0m.
H7.11.4 – Screening	**Infringe**. Rubbish collection screened by a 1.8m high wall or fence	No screening is proposed.

H7.11.5 – Gross floor area threshold	**Infringe.** 50m²	No GFA limit is proposed.
H7.11.6 – Maximum site coverage	**Infringe.** 1%	50% proposed.
H7.11.7 – Maximum impervious area	**Infringe.** 10%	60% proposed.

- Blanket land use consent is sought for fences on the front boundary less than 50% transparent in the Open Space – Conservation zone on Lots 1024, 1025, 480-482. This requires consent as a restricted discretionary activity under rule H7.9.1(A43).
- Blanket land use consent is sought for the construction of vehicle access and parking areas in the Open Space – Conservation zone on Lots 1001-1003, 1006, 1024, 1025, 1, 8, 281, 455-457, 478-486. This requires consent as a discretionary activity under rule H7.9.1(A50).

4.1.2.8 Transport

- The proposal seeks to establish vehicle crossings that exceed the maximum width requirement of 3.5m, with vehicle crossings up to 4.8m wide proposed. This requires consent as a restricted discretionary activity under rules E27.4.1(A2) and E27.6.4.3.2.
- The proposal seeks blanket consent for driveway gradients that exceed the maximum gradients for safety platforms of 1 in 20 for the first 4m length. This requires consent as a restricted discretionary activity under rules E27.4.1(A2) and E27.6.4.4(3).
- The proposal seeks to establish a vehicle crossing within 10m of an intersection where a vehicle access restriction control applies under E27.6.4.1(3) on Lots 6-7, 36, 80-82, 101-103, 119-122, 136-139, 238-239, 266-267, 274-276, 598-600 and 1021. This requires consent as a restricted discretionary activity under rule E27.4.1(A5);

4.1.3 Streamworks Consent (s13)

4.1.3.1 E3 Lakes, rivers, streams and wetlands

- The proposal involves the diversion of 1,134m of stream length (Streams 2, 6, 8, 9, 12, 15, 18, 20 21, 25, 26, 35, 36, 42 and 43) to a new course and associated disturbance and sediment discharge. This requires consent as a discretionary activity under rule E3.4.1(A19).
- The proposal involves the reclamation of 16 natural wetlands totalling an area of 2.02 ha. This requires consent as a non-complying activity under rule E3.4.1(A49).
- The proposal involves the partial reclamation of streams to a total of 1,028.5m. This requires consent as a non-complying activity under rule E3.4.1(A49).

4.1.4 Groundwater Consent (s14)

4.1.4.1 E7 Taking, Using, Damming and Diversion of Water and Drilling

- The proposal involves a diversion of groundwater caused by an excavation. The proposed works do not meet permitted activity standard E7.6.1.10(2) as the total excavation area is greater than 1ha and the excavations exceed a depth of 6m below the natural ground level (excavations

up to 11m are proposed). This requires consent as a restricted discretionary activity under rule E7.4.1(A28).

4.1.5 Contamination (S15)

4.1.5.2 E30 Contamination

- The proposal involves the disturbance of more than 200m3 of contaminated soil. This requires consent as a controlled activity under rule E30.4.1(A6).

4.1.6 Subdivision Consents (s11)

- The proposal involves subdivision on a site with two or more zones (Residential – Single House Zone, Residential – Mixed Housing Suburban zone, Residential – Mixed Housing Urban zone Business – Neighbourhood Centre zone and Open Space – Conservation zone) along an undefined zone boundary. This requires consent as a restricted discretionary activity under rule E38.4(A7).
- The proposal involves subdivision of land within the 1 per cent annual exceedance probability floodplain and which is subject to instability. This requires consent as a restricted discretionary activity under rule E38.4.1(A11).
- The proposal involves vacant sites subdivision involving parent sites of 1ha or greater in the Residential zone not complying with Standard E38.8.3.1. This requires consent as a non-complying activity under rule E38.4.2(A19).
    - Vacant sites within the Single House Zone not meeting the maximum average net site area requirement of 720m² (with an average lot size of 777m² proposed).
    - Vacant sites within the Mixed Housing Suburban zone not meeting the minimum net site area requirement of 320m² (with a minimum lot size of 270m² proposed).
    - Vacant sites within the Mixed Housing Suburban zone not meeting the maximum average net site area requirement of 480m² (with an average lot size of 483m² proposed).
    - Vacant sites within the Mixed Housing Urban zone not meeting the maximum average net site area requirement of 360m² (with an average lot size of 437m² proposed).
- The proposal involves subdivision not meeting the standards in E38.8 in residential zones. This requires consent as a discretionary activity under rule E38.4.3(A31).
- The proposal involves vacant sites subdivision in the business zone complying with Standard E38.9.2.3. This requires consent as a restricted discretionary activity under rule E38.4.3(A35).
- The proposal involves subdivision within the open space zone that is not provided for within Rule Activity Table E38.4.4. This requires consent as a discretionary activity under Rule Activity Table E38.4.4(A43).

4.2 Plan Change 79

The Proposed Plan Change 79 Decision Version (PC79) was notified on 9 August 2024. This replaces the Proposed Plan 79 notified version. PC79 has been appealed to the Environment Court in its entirety. However, the provisions of the Plan Change have legal effect. Resource consent is required under PC79 for the following reasons:

4.2.1 E27 Transport

- The proposal involves subdivision that will exceed the trip generation standard under E27.6.1.1(T3B) as it will enable more than 100 dwellings. This is a restricted discretionary activity under E27.4.1(A3).
- Parking, loading, access and electric vehicle supply equipment which is an accessory activity, but which does not comply with the standards for parking, loading, access and electric vehicle supply equipment is a restricted discretionary activity under rule E27.4.1(A2):
    - Standard E27.6.4.3.3 requires speed management measures for JOALS exceeding 30m in length. No speed management measure are proposed within the JOALS. The proposal does not comply with this standard.

4.2.2 E38 – Subdivision

- Subdivision that does not meet the general standards in E38.8 for subdivision in residential zones is a discretionary activity. The proposal does not comply with the following standards:
    - Standard E38.8.1.2(c): require pedestrian accessed to be vertically separated. The proposed pedestrian accesses are not vertically separated.
    - Standard E38.8.1.2(5): requires accessways exceeding 30m in length to have speed management measures. No speed management measure are proposed within the JOALS. The proposal does not comply with this standard.

4.3 National Environmental Standards

4.3.1 National Environmental Standards for Freshwater 2020

4.3.1.3 Streamworks Consent (s13 & s14)

- The proposal involves vegetation clearance within natural inland wetlands for the construction of specified infrastructure (roads and a key pedestrian accessway). This requires consent as a discretionary activity under regulation 45(1).
- The proposal involves earthworks within 10m setback from a natural inland wetland for the purpose of constructing specified infrastructure. This requires consent as a discretionary activity under regulation 45(2).
- The proposal involves earthworks outside a 10m but within 100m setback from a natural inland wetland for the purpose of constructing specified infrastructure, and will result in the complete or partial drainage of the wetland. This requires consent as a discretionary activity under regulation 45(3).
- The diversion of water within a 100m setback from a natural inland wetland for the purpose of constructing specified infrastructure where the proposal will change, or is likely to change, the

water level range or hydrological function of the wetland is a discretionary activity under regulation 45(4).

- The proposal involves vegetation clearance within natural inland wetlands for the construction of urban development. This requires consent as a restricted discretionary activity under regulation 45C(1).
- The proposal involves earthworks within 10m setback from a natural inland wetland for the purpose of constructing urban development. This requires consent as a restricted discretionary activity pursuant to regulation 45C(2).
- The proposal involves earthworks outside a 10m but within 100m setback from a natural inland wetland for the purpose of constructing urban development, and will result in the complete or partial drainage of the wetland. This requires consent as a discretionary activity under regulation 45C(3).
- The diversion of water within a 100m setback from a natural inland wetland for the purpose of constructing urban development where the proposal will change, or is likely to change, the water level range or hydrological function of the wetland is a restricted discretionary activity under regulation 45C(4).
- The diversion of streams will result in 1,134m of diverted stream length. The reclamation of the bed of any river is a discretionary activity under Regulation 57(1).

4.3.2 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

4.3.2.4 Discharge Consent (s15)

- The proposal involves contaminated soil disturbance that exceeds the permitted level pursuant to Regulation 8. A DSI and SMP/RAP have been provided to support the application. This is a restricted discretionary activity pursuant to regulation 10.

4.4 Associated Permitted Activities within Stages 10-13

- The reclamation of artificial drainage channels, constructed ponds, and proposed culverts (no greater than 29.9m) are permitted activities under the AUP(OP) and the NES-FM.
- Culverts less than 30m in length when measured parallel to the direction of water flow complying with the standards E3.6.1.18 is a permitted activity under E3.4.1(A32). The proposal involves 11 culverts no greater than 29.9m.
- The placement of culverts in, on, over, or under the bed of a river is a permitted activity under regulation 70 of the NES-FM if it complies with the conditions under 70(2). The EIA in **Appendix 2C** confirms compliance with the relevant conditions.
- The construction, operation and use of road network utilities that meet the permitted activity standards in E26.2.5.4 is a permitted activity under E26.2.3.2(A67).
- The installation of underground pipes for stormwater within the road is a permitted activity under E26.2.3(A49).

- Stormwater outfalls complying with the standards in E3.6.1.14 are a permitted activity under E26.2.3(A56).
- Water, wastewater and stormwater outfalls and ancillary structures complying with the standards in E3.6.1.14 are a permitted activity under E3.4.1(A39).
- Earthworks (including filling) within a 100-year AEP floodplain for the purpose of road network activities are excluded from the permitted activity standards under E26.5.5.2(18), E26.6.5.2(26), and E26.7.5.2(11).
- The construction of stormwater management devices or flood mitigation works that are to be vested in the Council (i.e. local purpose drainage reserves proposed) in the 1% AEP flood plain is a permitted activity under E36.4.1(A32).
- Noise during construction activities compliant with the limits in standard E25.6.27(1) measured 1m from and occupied building is a permitted activity. The proposal will comply with the permitted noise standards.
- Vibration during construction activities compliant with the limits in standard E25.6.30(1) is a permitted activity. The proposal will comply with the permitted vibration standards for avoiding building damage under E25.6.30(1)(a) at all adjoining receivers. The proposal will comply with the vibration amenity standards under E25.6.30(1)(b) for all properties.

4.5 Overall Activity Status

Overall, the proposal requires assessment as **a non-complying activity.**

5.0 Assessment of Effects

This section of the report is provided in accordance with clauses 6 and 7 of Schedule 5 of the FTAA.

These provisions require an assessment of the actual or potential effects on the environment. Clause 6 sets out the information required in the assessment of environmental effects and this is included throughout this volume of the application as well as the Overview Report in Volume 1.

Clause 7 of Schedule 5 of the FTAA outlines the matters to be covered in the assessment of environmental effects. This includes:

- *any effect on the people in the neighbourhood and, if relevant, the wider community, including any social, economic, or cultural effects:*
- *any physical effect on the locality, including landscape and visual effects:*
- *any effect on ecosystems, including effects on plants or animals and physical disturbance of habitats in the vicinity:*
- *any effect on natural and physical resources that have aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:*
- *any discharge of contaminants into the environment and options for the treatment and disposal of contaminants:*
- *any unreasonable emission of noise:*
- *any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.*

These matters are addressed in this section of the report below.

The existing environment, in particular the existing land uses and allotment areas of the subject site, as well as sites in the surrounding environment, are a relevant consideration to the proposal and is set out in Section 2.0.

The activities which are permitted on the site under the AUP(OP) are identified in Section 4.4 above.

An assessment of all actual and potential effects on people and the environment is set out below, as well as within the supporting specialist reports. It is considered that effects in relation to the following matters are relevant:

- Positive Effects;
- Economic Effects;
- Visual Landscape and Amenity Effects;
- Subdivision Design and Layout;
- Ecological Effects;
- Freshwater Effects;
- Traffic Effects;

- Infrastructure Effects;
- Stormwater and Water Quality Effects;
- Flood Hazard Effects;
- Land Stability Effects;
- Site Contamination Effects;
- Erosion and Sediment Effects;
- Groundwater Effects; and
- Construction, Noise and Vibration Effects.

These matters are set out and discussed below.

Heritage and archaeological effects are assessed in **Volume 5** of the AEE.

5.1 Positive Effects

The development accords with the purpose of the FTAA to facilitate the delivery of infrastructure and development projects with significant regional or national benefits. The development will result in significant public benefit through the creation of a significant number of housing allotments, with the delivery of the allotments being accelerated through the FTAA process in comparison to a 'conventional' consenting process. Furthermore, the proposal is considered to result in additional positive effects, including:

- The proposed subdivision is an efficient use of land, where 623 vacant residential lots, 27 super lots, two neighbourhood parks, 21 local purpose (drainage) reserves and a supporting roading and pedestrian network in accordance with the Wainui Precinct Plan will be created. The subdivision is consistent with the vision and form of development sought within the Wainui Precinct and will allow for future development that is considered appropriate for the anticipated development in the wider Milldale area. It is anticipated that the subdivision will facilitate the development of approximately 919 dwellings of varying typologies, which will significantly contribute towards meeting the demand for housing in the wider Auckland region in an appropriate location and density.
- The proposed reserves will provide a mixture of functional and useable open space that will create ongoing positive social and ecological benefits for the Milldale community.
- The proposed block layout and road network provides for a walkable design and will improve permeability within the Milldale area, with a strong north-south and east-west pedestrian axis consistent with the indicative key pedestrian networks identified in the Wainui Precinct Plan.
- The proposed pedestrian accessways, bridges and stream edge corridor will result in a positive design outcome and off-street recreational corridors for pedestrians and cyclists.
- The proposed roading network will deliver critical infrastructure as it will complete connections along the northern perimeter of the site and deliver the unformed paper road of Cemetery Road Link. The roads align with the pre-determined roading location set out in the Wainui Precinct Plan, in addition to the roading pattern and urban form approved in earlier stages of

the Milldale development. The proposal will provide a high level of safety, access, permeability and efficiency for all travel modes.

- The proposed earthworks will provide a suitable and stable ground contour for future development that is free of flood and instability hazards.
- The proposed roads, pedestrian bridges and culverts have been designed to comply with the relevant standards, being designed to retain as much stream length and stream value as possible. These structures are required to provide for the roading and alignment and pedestrian connections to support the wider Milldale catchment.
- The proposed planting restoration works along the riparian margins of Milldale Stream will create positive ecological effects and will enhance an existing low value ecological area with high ecological value, which will benefit the wider catchment and receiving environment.

5.2 Economic Effects

The economic benefits associated with Stages 10-13 are addressed in the Overview Report in the context of the full proposal. Section 5.1 of the Economics report above also outlines the positive social and economic effects of Stage 10-13 specifically.

The assessment below focusses on the effects of the proposed location for the Neighbourhood Centre in Stage 12, on the amenity and vitality of Milldale's centre network (Objective H12.2(5)-(7)) of the AUP(OP) and the proposed increase in density within the SHZ super lots.

As detailed in the Economic Report prepared by Insight Economics (Appendix 2M), the size of the Local Centre zone and Neighbourhood Centre zone within Milldale far outweighs and exceeds any likely future demand by future households. To put this into context, when compared to the Structure Plans for other major developments in Auckland (namely Warkworth, Whenuapai, Pukekohi – Parerata as well at the Auckland regional average, Milldale's Local Centre land per 1,000 households (1.6 ha) is more than five times the Auckland average, while its Neighbourhood Centre provision (0.8 ha) is nearly twice the regional norm. When reviewing the net developable area of all Neighbourhood Centres across the region and applying the regional average level of provision to Milldale, it is anticipated to require only 1.7ha of Neighbourhood Centre land. However, Milldale's provision exceeds 3.6ha.

Due to the oversupply of commercial land within the Milldale development and the Stage 13 site's proximity to the Local Centre and the Neighbourhood Centre in Stage 2, the location of the Business - Neighbourhood Centre zone within the Stage 13 area is proposed to be re-located and reduced. The proposed location is in the northern portion of Stage 12 to more effectively meet future demand and to better optimise the performance of the centres across the wider development.

While the area of the Neighbourhood Centre zone, which has been re-located has been reduced from 7,490m² to 1,289m², the reduction in scale will better match the actual demand for retail services and help ensure the Milldale Town Centre and existing Neighbourhood Centre in Stage 2 function as intended. The proposed relocation will allow a more efficient centre network for Milldale and will improve the financial viability of the retained centres within and adjoining the Milldale development without affecting the community's access to convenience goods and services. The proposed area within Lot 1050 is more than adequate to meet the possible size

requirements and catchment demand for the location, and better reflects the conclusions reached by Insight Economics.

With regards to the SHZ superlots, strong demand at Milldale supports the delivery of additional, higher density lots. Existing and planned infrastructure can accommodate the proposed increase in density, aligning with regulatory frameworks including the NPS-UD that encourage intensification where services are adequate. Market feasibility is evidenced by swift sales, the success of smaller lots elsewhere, and growing demand for affordable, compact homes. In turn, higher densities broaden housing choices and help ease affordability pressures by creating more dwellings on the same land footprint.

Overall, there are no evident economic, demand-side, or servicing barriers to intensifying these superlots beyond the SHZ's minimum 600 m² lot size. From an economic perspective, increasing density on the SHZ superlots will improve Milldale's ability to provide affordable, diverse housing stock in a rapidly growing part of Auckland.

Overall, it is considered that the economic effects associated with the re-location of the area from Stage 13 to the northern portion of Stage 12 will be less than minor.

5.3 Visual Landscape and Amenity Effects

The site has been identified in the AUP(OP) as being suitable for urban intensification through the underlying zoning and Wainui Precinct provisions and live zoning. As such, there is an expectation that the site will undergo a shift from open pastureland to an urban environment containing residential and commercial development with associated roading and infrastructure.

The proposed subdivision, including the size and shape of each lot will result in a level of intensity, scale of activity and appearance that is compatible with the character, and residential and local centre amenity provided for within the zones. All lots are able to achieve a future building compliant with the permitted bulk and location zoning standards and will be sufficiently serviced with civil infrastructure and roading. Overall, the subdivision will provide for future development that will integrate well with the established suburban environment in Milldale.

The proposed earthworks allow for the retention of the general landform of the Stages 10-13 site. Given the sloping nature of the site, earthworks are proposed to facilitate contours for roading and future development. The proposed earthworks will be temporary in duration and not uncommon within the landscape. Care has been taken in all situations to avoid walls facing public frontages, with all retaining walls and planted batters located on internal boundaries and, therefore, will be visually screened from the wider environment by the bulk of future dwellings and vegetation that will be established on the proposed lots. Hence the retaining walls will not result in adverse dominance effects to the streetscape. Any visual effects of the earthworks during construction will be temporary in nature and will eventually form part of the surrounding urban environment.

Extensive landscape planting is proposed to contribute to residential amenity values. The proposed roads, pedestrian accessways, riparian margins and drainage reserves will be planted to improve the overall amenity of the area, reducing potential visual effects on the landscape as the site transitions from open pastureland to an urban environment. Additionally, the planting will help to offset the removal of existing street trees and riparian vegetation. The proposed street planting

will contribute to a high-quality streetscape and will provide significant landscape, amenity and biodiversity benefits in the long term.

Landscaping is proposed to contribute to residential amenity values within the development. The proposed reserves, inclusive of the proposed enhancement native planting, weed and pest management along the open space corridor will improve the overall amenity of the area, counteracting potential visual effects on the landscape as the site transitions from open pastureland to an urban environment.

Overall, while the proposal will result in a notable change in the appearance of the site, any adverse visual landscape and amenity effects will be less than minor, taking into account the high standard of design and residential and local centre development envisaged by the site's urban zoning.

5.4 Subdivision Design and Layout

The site has been identified in the AUP(OP) as being suitable for urban intensification within the Wainui Precinct provisions and live zoning, both of which are based on master planning undertaken at the time the land was rezoned. As such, there is an expectation that the site will undergo a shift from an open rural environment to an urban environment containing residential development with associated roading and infrastructure. The proposed residential subdivision will result in a level of intensity, scale of activity and appearance that is compatible with the character, and residential amenity provided for and anticipated under the AUP(OP). This will also be visually in keeping with the nature of development that has been previously approved within the surrounding environment.

The proposed subdivision layout has been largely influenced by the previously approved roading pattern from Milldale Stages 5-9, the steep topography and level changes throughout the site, and the anticipated roading layout from the Wainui Precinct Plan. These site constraints have dictated the block structure for the current stages. This approach maximizes the efficient use of the land, balancing the constraints of the site while aiming to achieve a functional and accessible development. These factors have led to infringements on the minimum, maximum, and average lot size standards.

With reference to the Urban Design Report in **Appendix 2L**, the use of retaining and RE slopes within lots has resulted in slightly larger maximum average net site areas within the MHS and MHU zoned areas. The increased site areas form future building platforms that minimise excessive earthworks and maintain a degree of natural topographical variation. These topographical constraints have also caused certain lots to be reduced to allow room for RE slopes. This has resulted in a negligible number of MHS zone lots having a lower site area than the minimum net site areas required.

Despite the infringements to the lot size standards, the proposed lots are well-suited to the zones. They are regular-shaped, front-loaded lots with compliant building platforms allowing for the future development of dwellings. The proposed lots create a range of sizes and shapes, which not only enriches the streetscape but also enhances the diversity of housing choice in the area. The design of the lots enables flexibility for future dwelling designs, allowing for both compliance with the permitted building envelope or, where necessary, the ability to seek consents for any required infringements. The resulting variation in lot sizes will create a diverse streetscape character for the area while maintaining the potential for well-designed, functional homes.

The Single House zone was applied to the edges of the Milldale development, adjacent to the Future Urban zone, to create a transition between higher-density development within the central area and the rural land beyond. However, with structure planning advancing north of Milldale and a Plan Change lodged to urbanise Milldale North, maintaining low-density housing as a transition on the northern edge is no longer considered to be necessary. The Council has recognised this through Plan Change 78, which proposes to rezone the Single House and Mixed Housing Suburban Zones in the Wainui Precinct to Mixed Housing Urban.

The layout of the proposed SHZ superlots have been carefully designed to integrate medium-density housing in strategic locations that enhance connectivity, urban form, and amenity. Along Wainui Road, a key arterial route that is being upgraded, higher-density development is positioned to complement the transport corridor, optimising access to active modes and public transport. Around Argent Lane and Cemetery Road Link, medium density superlots are co-located with the proposed NCZ to create a walkable, well-connected residential catchment that supports local amenities. In Stage 13, the SHZ superlot design utilises natural landforms, with the superlot positioned below a landscaped RE slope and oriented toward a local-purpose reserve, ensuring a tiered transition in the anticipated built form while enhancing passive surveillance and visual amenity.

The proposed superlots within the Single House zone are considered to be of a suitable size and scale to accommodate more intensive comprehensive residential development and are well located adjacent to a strong public transport network that has been designed to support the capacity of an increased urban density development. This has been confirmed through the lot testing in the Urban Design Report (Appendix 2L). Consent notices are proposed to apply the RDOC to future development. Development that does not comply with those standards would need to be considered through a separate resource consent or 221 variation of consent notices process. This mechanism ensures that the potential effects of future development on these lots, in terms of residential and visual amenity effects, will be mitigated and less than minor.

In order to provide efficient and practical lot sizes and shapes that take into account existing and proposed road alignments, the proposal results in the creation of lots that have multiple zoning applied to them. The matter of split zoning has been resolved on these lots in order to ensure there is a consistent built form outcome. All lots are able to achieve a future building compliant with the permitted bulk and location zoning standards and will be sufficiently serviced with civil pipes and roading. Consent notices are proposed to confirm the zone that will be applicable to future development. It is considered that the management of split zoned lots is largely an administrative exercise to resolve mapping discrepancies. Accordingly, potential adverse effects associated with split-zoned lots and the consequential resolution are considered to be nil.

Overall, it is considered that the proposed subdivision is of a form, scale and design that supports a high-quality residential streetscape amenity consistent with the Milldale developments existing and planned residential character and pattern of development. Overall, it is in general accordance with the underlying zoning and the Wainui Precinct provisions. The proposal is considered to contribute positively to the overall pattern of subdivision in Milldale.

5.5 Ecological Effects

The proposal has potential to result in adverse ecological effects due to the loss of 16 natural inland wetlands, reclamation and diversion of streams, works in proximity to wetlands and urban streams,

and the removal of vegetation across the site. These works are necessary to deliver an efficient urban development on the site consistent with the requirements of the Wainui Precinct Plan.

The ecological values associated with the proposal have been assessed by Viridis Environmental Consultants in Appendix 2C.

5.6 Freshwater Effects

The proposal will result in adverse effects to freshwater habitat and ecology due to the proposed removal of 16 areas defined by the current version of the NES-FM/NPS-FM as natural inland wetlands totalling a total area 1.59, the partial reclamation of a potential wetland within 147 Argent Lane totalling 0.43 ha, and the partial reclamation of 1,208.5m of stream length. This will involve the full loss of ecological extent and value from the wetlands and partial loss of extent in relation to the streams, with adverse effects on freshwater habitat and ecology. Further, the earthworks operations have potential to adversely affect the streams to be protected and retained if these works are not carefully managed.

The areas defined as wetlands under the current NES-FM/NPS-FM span across the Stages 10-13 project area and 147 Argent Lane site without any ecological links, and have a range of sizes, totalling an area of 2.02 ha. The impacted wetlands are dominated by pasture grasses and all have a low ecological value due to the high modification from historical agricultural practices that have severely impacted the areas through pugging and grazing, lack of structural tiers, very high dominance of exotic species, altered hydrology through historical drainage and lack of aquatic habitat. The wetlands are also isolated in nature and do not have any ecological link to one another. There is limited potential for restoration of the wetlands due to the lack of potential habitat for native fauna. Overall, the ecological value of the impacted wetlands is considered to be low.

The streams identified within the project area consist of one permanent stream (Milldale Stream), and 15 intermittent streams (Stream 2, 6, 8, 9, 12, 15, 20, 21 (intermittent portion), 26, 27, 35, 36, 42 and 43) totalling a stream length of 3,277.4m. Due to heavy modification from farm practices, artificial deepening, poor water quality and habitat, the streams were considered to be of low ecological value. A total of 1,208.5m of stream length is required for reclamation, however, 1,134m of stream length is to be diverted to a new water course and will incorporate extensive riparian planting of native vegetation.

To minimise potential for adverse aquatic effects on retained streams including Milldale Stream within the subject site, an appropriate works methodology and best practice erosion and sediment measures to GD05 will be implemented prior to, and during, the proposed works. This will reduce the risk of potential discharge of sediment laden water from land to the adjoining watercourses. Further, the salvage of native eels and fish (if required) will be undertaken by an experienced ecologist.

The proposed stream works to install the proposed culvert are identified as a permitted activity under the AUP(OP) and NES-FM. In particular, rule E3.4.1(A32) enables construction of a 30m culvert, with a maximum culvert length of 29.9m proposed. This forms part of the permitted baseline with respect to assessing the effects of the proposal, with any effects from these activities therefore anticipated by the AUP(OP).

The proposal involves the use of stormwater devices to mitigate the loss the impact wetlands have on the functional roles of flood attenuation and nutrient capture. Additionally, the watercourses

to be retained are diverted, and the stormwater network has been designed to discharge at the most upstream part of the watercourse while maintaining the pre-development flow rate of the existing watercourses. Stormwater treatment is proposed for the existing and new impervious surfaces. This will reduce and remove suspended solids and associated contaminants prior to discharge to the receiving environment, including watercourses. This will improve water quality entering streams and will result in positive effects on freshwater habitats.

As detailed in **Appendix 2C**, the significance of adverse effects on ecological values can be assessed by considering the value of the species or ecosystem being affected, and the magnitude of its loss at the local level and wider environment context. The tool used to assess significance of effects is the matrix approach as described by the Environment Institute of Australia and New Zealand (EIANZ). As described above, the EIA Report concludes the ecological value of the wetlands and streams are low given their current state and history of modification.

5.6.1 Wetland and Stream Enhancement / Compensation

The proposed wetland offset and stream enhancement compensation planting works are detailed in Section 3.9 of the EIA prepared by Viridis in **Appendix 2C**, Landscape Plans prepared by Beca in **Appendix 2Q** and Wetland Offsetting Memo prepared by WWLA in **Appendix 2V**. The compensation will be implemented in Milldale North (owned by FHLD), located on the opposite side of Wainui Road and approximately 1.4km to the north of the project site. Both the impact and offset sites are located within the wider Rodney Ecological District and Orewa River catchment.

To offset the residual loss of 2.02 ha of wetland and to compensate for the 1,028.5m of stream length unable to be avoided, remedied or mitigated at the Milldale impact site, the creation of one wetland feature of 2.81 ha is proposed along with 598.8m² of restoration and enhancement planting of streams within Catchment 1, 2 and 3. Furthermore, daylighting of five streams (2 within the offset site and 3 within the Stages 10-13 project area). The proposed enhancement offset works include the creation of new 'created offset wetland', planting the wetlands with appropriate native species, planting a 10m buffer with appropriate species, planting a 10m riparian margin of 433.2m of length of existing streams, weed and pest control, stock fencing and legal protection by a covenant. This will address the loss of wetland and stream extent and ecological value as a result of the reclamation.

As detailed within the EIA in **Appendix 2C**, the proposed offset and compensation will result in a no-net loss in wetland extent and wetland value. There will be an overall net loss of intermittent stream extent, the proposed offset and compensation will restore or enhance ecosystem processes equivalent to or greater than those lost. This includes improvements in water quality, habitat diversity, biodiversity support, and hydrological stability. This will result in significant positive effects for the Rodney Ecological District and Auckland region.

5.6.2 Potential Impacts of Wetland Reclamation on 147 Argent Lane

The redirection of surface water within the proposed development area during earthworks to recontour the site for specified infrastructure and urban development will result in the partial reclamation of a potential wetland located on third-party owned land at 147 Argent Lane (Lot 4 DP 151229).

The identified wetland, within the north-western portion of 147 Argent Lane, is predominantly surface water-fed in its upper portion (59%), while the remainder (41%) is groundwater-supported.

By redirecting stormwater runoff away from this wetland, removal of 66% of its surface water inputs is expected. Additionally, groundwater drawdown is expected to lower the water table below 0.5 m from the surface, reducing the groundwater-supported portion by 70%. As a result, the wetland extent is expected to reduce from 6,300m² to approximately 2,025m², representing a 68% loss in extent.

This reduction in surface water availability to the wetland is expected to occur gradually over time as the site is progressively earthworked. Several options were explored to re-divert surface runoff to the wetlands from the Site, these have been discussed further in Sections 4.3.3.1 and 4.3.3.2 of the Infrastructure Report in Appendix 2F. However, these options required either works in 147 Argent Lane or works that are not in accordance with Stormwater Engineering Standards. None of the options were considered practicable or appropriate. As part of the proposed mitigation and offset package in Milldale North (refer to Section 3.9 above), FHLD has included offset for the partial loss of the potential wetland located on 147 Argent Lane.

With respect to the direct impacts on third-party land, it is acknowledged that the works will result in a potential effect on these persons, as the partial reclamation of a potential wetland will change the existing feature on a site not owned by FHLD. However, the Stages 10-13 design has taken into consideration any potential future development that may be undertaken on 147 Argent Lane. This has been reflected in the roading layout which directly allows for future development on this site to seamlessly tie into the roading network proposed and be in general accordance with the underlying zoning and Wainui Precinct Plan. Therefore, the reduction of the potential wetland feature aligns directly with the purpose of the FTAA, which is to facilitate the delivery of urban development projects with significant regional and national benefits. It is considered that the development proposed within this application, or any future development undertaken of 147 Argent Lane, necessitates the need for this wetland to be fully reclaimed in the future.

As set out in the Consultation Report (Volume 1), engagement has been undertaken with the owners of 147 Argent Lane with respect to the reclamation of the wetland on their site and the proposed stormwater design to ensure there are no additional flooding effects as a result of the Stages 10-13 development. Through this engagement, the owners have reviewed the documentation provided, and have agreed that the wetland reclamation is the preferred design outcome. Therefore, on this basis, the proposal has proceeded with the current design with the endorsement of the owners of 147 Argent Lane as they are satisfied that the effects that have been identified upon their property have been adequately addressed.

5.6.3 Freshwater Ecology Effects Conclusions

Overall, taking into account the off-site offset and compensation proposed to address adverse effects that cannot be mitigated or avoided, the proposal will result in minor effects on freshwater habitat and watercourses. The proposed programme of off-site restoration and enhancement works in Milldale North will adequately offset and compensate for the loss of ecological extent and values associated with the removal of 2.02 ha of wetland and 1,028.5m of stream to be reclaimed, and will provide a net benefit of ecological values in the Rodney Ecological District, Orewa River catchment and wider Auckland region.

5.7 Terrestrial Ecology Effects

Whilst the proposal includes the removal of trees and riparian vegetation across the site, the existing quality of this vegetation to be removed is considered to be low. Outside of the riparian yard, the vegetation is considered to be of low quality and removal will not result in any adverse ecological effects are considered to be less than minor. Riparian vegetation removal will be limited as far as practicable to dying or exotic species, and overall effects are considered to be moderate, and can be managed to positive. Following completion of removal, significant revegetation and planting will occur around the riparian margins of the retained and diverted streams which, as summarised in the Ecological Report (Appendix 2C) will significantly increase the botanical and ecological values within the site.

The temporary loss of vegetation across the site, it not anticipated to adversely impact any birds across the site. As birds are highly mobile, there is suitable available habitat within the receiving environment for them to relocate. However, any tree removal will occur outside of the bird nesting season.

The effects on lizards is considered to be moderate and temporary and can be mitigated to low. Effects on lizards will be managed through a Lizard Management Plan. Additionally, as the surveys of the site have not identified any bats, any effects are considered to be negligible.

5.8 Traffic Effects

The proposed subdivision has the potential to result in adverse road safety and efficiency effects as a result of the increase in residential density, traffic generation, and flow through the new roading network.

The proposed roading layout and increase in traffic flow has been assessed in the Traffic Assessment Report (Appendix 2N). The report confirms that the proposed roading hierarchy, layout, intersections, and cross sections meet the Auckland Transport Code of Practice (ATCOP) requirements. The alignment and grade of the new roads and intersections meet the Austroads sight distance requirements, thereby reducing the potential for adverse road safety effects.

Traffic modelling undertaken by Stantec has confirmed that the roading network on the perimeter of the site will continue to operate well during both morning, and evening peak hours. The additional vehicle trips as a result of the subdivision were included in the original ITA completed for the full build out of 4,500 dwellings over the Milldale site and are considered to be low. Furthermore, Stages 10-13 have a number of different access points to the wider transport network. As such, the increase in vehicle trips will be dispersed and distributed throughout the network without adversely affecting the capacity of surrounding intersections.

The modelling has also taken into account the retention of Cemetery Road where it extends to the north beyond the site and connects to Grayson Road and Wainui North further afield within the road network. Whilst this road does provide a link between the proposed development area and Wainui Road, it will primarily only provide an access function for neighbouring properties as the unsealed nature (loose gravel surface), topography and alignment will not make it an attractive through-route for general traffic.

The proposal extends existing roads within the development. A number of other collector and local roads will be formed to serve the development. Overall, the proposal will provide a high level of

safety, access, permeability, and efficiency for all travel modes and will result in significant positive effects by completing this section of the roading network.

Further, the proposed roading and pedestrian network will support a well-functioning, safe and efficient urban environment. The proposal will increase the active mode network through the Milldale development and will create a strong pedestrian axis between key amenity areas including the local centre and Milldale Stream corridor. The proposal is able to accommodate transport demands and future growth in the area.

The proposed roading layout and typologies have been designed in general accordance with the Wainui Precinct Plan. There is no alternative location or hierarchy for the proposed roads and pedestrian links, given that they tie into the existing / approved roads on the perimeter of the site. As detailed above, the proposed roads and pathways will sufficiently integrate with existing development in the Milldale development. The traffic report confirms that the proposed roads will provide a good level of connectivity to the surrounding road network, through the extension of existing or approved roads in adjoining stages.

In relation to the re-location of the NCZ lot, from a transport perspective, this change is not considered to give rise to significant adverse traffic effects as the neighbourhood centre would now be adjacent to a collector road and future bus route, enabling good accessibility by public transport. The neighbourhood centre would also be readily accessible by active modes through the dedicated cycle paths on both sides of the collector road and the footpaths provided on all the roads in the area. In this respect, the location of the neighbourhood centre within Stage 12 is considered appropriate from a transportation perspective.

Blanket resource consents have been sought to establish vehicle crossings up to 4.8m in width for all lots with a front boundary of 14m or greater. This is consistent with the previously approved stages of the Milldale development. The over-width crossings will visually be seen in context with the future dwelling on each lot. As the vehicle crossing design is being sought early in the process (within the subdivision stage), this will avoid any ad-hoc visual amenity effects or conflict with assets or fixtures in the road berm. The vehicle crossings over the permitted 3.5m width will not affect the provision of on-street parking availability or parking bays. The additional width to crossings will facilitate safe manoeuvring into and out of driveways and will not result in any additional adverse safety or amenity effects when compared to a compliant crossing.

The lots with vehicle crossings within 10m of an intersection will have clear and unobstructed visibility of oncoming traffic on both roads, given their location at the head of a T-intersection. As such, vehicles will be able to safely enter and exit the lots without conflicting with other users of the road network. All roads are slow-speed environments and will primarily provide residential access, with low to medium traffic volumes. Therefore, there is a low risk of safety issues associated with vehicle entry/ exit into the proposal lots. As such, pedestrian and cyclist safety will be maintained.

With regards to the effects related to driveway gradients, the AT guidelines allow a maximum 9% grade where a driveway slopes up to the road and a maximum 13% grade where the driveway slopes down to the road. In this respect, the proposed Milldale standard is entirely consistent with the AT guidelines.

As assessed within the traffic report, there is a technical infringement of the AUP(OP) standard for the situation where the driveway slopes down to the road. The issue is not relevant from a traffic

engineering perspective. Where driveways slope down to the road boundary, driver visibility is not compromised by the angle of the car in the same way that a driver would be constrained by the bonnet of the vehicle when the driveway slopes up to the road boundary. Furthermore, the magnitude of the difference in terms of height is only 300mm over a distance of 4m, which is not considered significant and unlikely to represent a serious issue for drivers or vehicles.

With regards to construction traffic, Stantec conclude that based on experience with the construction planning and traffic management associated with similar developments and bearing in mind the capacity within the existing road network; with the appropriate CTMP in place and the measures within the CTMP implemented, it is considered that construction activities can be managed to ensure an appropriately low level of construction traffic effects.

Overall, the proposal will provide a high level of safety, access, permeability and efficiency for all travel modes and will result in significant positive effects with any adverse effects being temporary and less than minor.

5.9 Infrastructure Effects

All proposed lots will be adequately serviced by new reticulated stormwater, wastewater, and potable water networks. This will be achieved through an extension of the existing public reticulated networks located in and/or adjoining the site. The existing and proposed networks have been sized to accommodate the increase in stormwater, wastewater and water demands on the site. Utilities will also be provided to each new lot.

Overall, the proposed development can be adequately serviced without resulting in adverse effects on the capacity of existing reticulation and infrastructure.

5.10 Stormwater and Water Quality Effects

The proposal involves the development of additional impervious surfaces for the development of a new roading network. This has the potential to result in adverse stormwater effects in terms of water quality, quantity, natural hazards and flooding, outfalls and operation and maintenance.

Stormwater runoff from the new impervious surfaces will be conveyed to the proposed reticulated stormwater network. The proposed stormwater management devices will reduce the volume of stormwater discharged to the environment and will provide the level of detention/retention required by the Wainui East SMP, AUP(OP), and Auckland Councils GD01 document.

Stormwater will be managed through detention of flows to a predevelopment level up to the 10% AEP storm event. As soil infiltration rates in Milldale do not allow retention to occur, the required retention will be included in the detention volume. The secondary overland flow paths will accommodate rain events that exceed the 10% AEP storm event. These measures will achieve hydrology mitigation in accordance with the relevant standards in the approved Wainui East SMP and will ensure that the risk of increased flooding of downstream environments from the increase in impervious surface is adequately managed while also reducing the risk of erosion downstream. The design of the stormwater controls will ensure that the catchment areas remain similar to the existing catchments and that the discharge to receiving watercourses is generally consistent with the existing scenario.

Treatment of the new roading network stormwater flows will be provided in the construction of stormwater treatment devices, which are intended to treat flows at the source prior to entering

the stormwater network. This will capture any contaminants from vehicles from the road and prevent discharge into receiving waters. This will ensure that water quality is maintained throughout the new road network.

The stormwater flows from the development will ultimately discharge to the streams within the receiving environment providing for recharge to the streams and receiving waterbodies. As noted above, it is proposed to manage the flows to predevelopment levels up to a 10% AEP storm event by controlling the discharge from the proposed stormwater management structure, including the dry basins and rain gardens. The discharge of flows to watercourses will occur via new outlet structures, to be designed at the detailed design stage. Riprap and landscaping will be provided to reduce the impact of engineered structures on the watercourses and minimise stream erosion.

Overall, it is considered that the effects on water quality from the stormwater runoff will be less than minor. The proposal includes improved stormwater controls, detention, quality treatment and best practicable measures to ensure stormwater quality, quantity and erosion effects are appropriately avoided or mitigated.

5.11 Flood Hazard Effects

Auckland Councils GIS viewer indicates that the site contains floodplain and overland flow path associated with the streams on the site. Flood modelling undertaken by Woods (Appendix 2G) has defined the extent of the existing flood plain.

Flood modelling indicates that the flows up to the 100-year ARI plus climate change storm event will be fully contained within the Milldale Stream corridor following the completion of the proposed earthworks activities and installation/upgrade of the 11 identified culverts. The earthworks activity involves recontouring and raising of the land to ensure the flood and overland flow is contained in the Milldale Stream corridor and associated drainage reserves (Lots 6000-6022). The model has been stimulated to ensure that there will be no effects on building floor levels.

The flood modelling demonstrates that the proposal will not displace or increase flood waters upstream/downstream or on neighbouring properties. While the proposal involves placing fill within existing flood plains during earthworks, the flood model confirms that there will be minimal change in flood extent and levels when compared to the pre-development model, and a reduction of flood depths and flood extents overall. The proposed roads will have sufficient capacity to convey overland flows during a 100-year storm event (plus climate change[38]), which will be consistent with AT's requirements for flow, depth, and velocity. Further, the inclusion of a primary stormwater network will further reduce the maximum flood depth to within acceptable levels. The proposal will not prevent or hinder the conveyance of flood waters within the site, displace or result in a discernible increase of flood waters upstream/downstream or on neighbouring properties.

Further, the upgrades of the culverts will not increase flood risk either upstream or downstream of the structures. The culverts are designed to adequately convey flows up to the 100-year storm event (plus climate change) with an adequate freeboard compliant with the Council's stormwater

[38] Refer to Section 3 of the Flood Assessment Report for the climate change scenarios modelled.

code of practice. The modelling shows that flows will be contained within the Milldale Stream corridor and will not create a hazard at the adjoining land parcels.

Overall, any potential adverse effects on the environment in terms of flood hazards will be less than minor.

5.12 Land Stability Effects

The site has been assessed for its suitability by CMW (**Appendix 2A**). The report confirms that the subdivision layout and geotechnical nature of the site is suitable for the proposed earthworks and future residential development. The slope stability analysis undertaken by CMW, in addition to subsurface and geotechnical condition investigations, has confirmed that the 'factor of safety' for the site is acceptable with stability enhancement works required. All earthworks are to be undertaken in accordance with the recommendations for the GIR any subsequent analysis reporting, or instructions provided by the geotechnical engineer.

Further, a full GCR will be prepared at the completion of each stage of earthworks. This will be submitted to the Council confirming the suitability of the lots for proposed residential development on the site. It is expected that all future residential development on the proposed lots will be undertaken in accordance with the recommendations of the GCR.

It is considered that any adverse effects associated with the proposed earthworks, subdivision of the site and subsequent dwelling construction will be less than minor. Following the completion of works, there will be a net improvement in the safety and stability of the wider area.

5.13 Site Contamination Effects

The DSI prepared by GES, included as **Appendix 2H**, identifies that the Site has a history of uses, including a dairy farm, stockyard and orchard. GES has identified that it is likely HAIL activities have been undertaken on the site, including pesticide storage and waste disposal (mil shed effluent ponds). In addition, asbestos containing building materials have been utilised on the existing buildings.

To mitigate any potential effects on human health and environmental discharge associated with the disturbance of contaminated soils, GES recommend the works be undertaken in accordance with the Site Management Plan (**SMP**) and SMRAP included as **Appendix 2I.** This document details the remediation goals and methodology, environmental management procedures, unexpected contamination discovery protocol, health and safety measures, testing requirements and validation reporting. The adherence to the SMP and SMRAP have been adopted as conditions of consent. By undertaking the works in accordance with the SMP and SMRAP, GES conclude that potential adverse effects on human health and the environment from contaminated land will be acceptable.

It is therefore considered that with the implementation of the SMP and SMRAP, any adverse effects on human health and the receiving environment will appropriately be avoided, remedied or mitigated to be less than minor.

5.14 Erosion and Sediment Effects

The proposed area and volume of earthworks will increase the potential for the generation and discharge of elevated levels of sediment. If not managed, sediments may discharge into adjacent properties and waterbodies, which can ultimately adversely affect local water quality.

To avoid and mitigate these potential adverse effects, a number of erosion and sediment control measures will be implemented prior to earthworks commencing and will be in place for the duration of the earthworks until the site is stabilised. The proposed erosion and sediment control measures are detailed in the Erosion and Sediment Control Plans in **Appendix 2K**, designed in accordance with GD05. The works will be undertaken in accordance with the methodology detailed in **Appendix 2R**. This will ensure that sediment is contained within the site works area, without discharging into the adjoining waterbodies.

Overall, subject to ensuring that the proposed erosion and sediment control measures are implemented and in place for the duration of the earthworks period, potential discharges of sediments on the immediately surrounding area, to waterbodies and potential effects to water quality will be less than minor.

5.15 Groundwater Effects

Groundwater investigations have been undertaken by WWLA to consider the potential effects on groundwater as detailed in the drawdown assessment in **Appendix 2S**. the proposal involves excavations up to 11m, which will extend up to approximately 6m below the groundwater table.

The extent of groundwater drawdown and settlement will be contained within the proposed earthworks footprint. The proposed excavations will result in a 2m drawdown within Stages 10-11 and 3m within Stage 12-13 (noting a small portion up to 5m). The magnitude and extent of the drawdown are localised and minimal.

Overall, the assessment concludes that the proposed scale of effects is of limited magnitude and localised, such that the proposed activity will avoid any adverse effects. Hence, no mitigation or monitoring is required, and any groundwater effects are less than minor.

5.16 Construction, Noise and Vibration Effects

The proposal will result in temporary construction effects for the duration of the proposed earthworks, including traffic, noise, sediment and dust effects. As confirmed by the investigations undertaken by Styles Group in **Appendix 2P**, all construction activities will comply with the maximum AUP(OP) construction noise and vibration standards.

All practicable measures will be put into place to reduce the potential sources of noise and vibration during earthmoving periods, whereby noise limits recommended in the New Zealand Standard NZS 6803:1999, Acoustics-Construction Noise, and any relevant amendments, will be adhered to.

In terms of heavy vehicle traffic, it is noted that earthworks will be contained within the applicant's landholding and, therefore, will largely be internal to the site. Vehicle movements will be limited to the transportation of machinery and equipment to and from the site, the importation of construction materials, and vehicles associated with site staff, inspectors, and consultants. As is

typical with a development of this scale, the provision of a CMP is proposed as a consent condition to ensure construction activities, and any traffic effects are appropriately managed.

The proposed construction works are an unavoidable precursor to the provision of additional residential dwellings, and roading sought under the AUP(OP). The extent of secondary earthworks proposed are small in scale. Measures will be put in place to mitigate and reduce the potential for any adverse traffic, noise, dust or sediment laden stormwater discharge effects during the construction phase.

Overall, potential adverse construction related effects will be less than minor and temporary, considering practicable measures consistent will be implemented to minimise effects relating to traffic, noise and dust.

5.17 Mitigation and Monitoring

Clause 6(1)(d) of Schedule 5 of the FTAA requires that an AEE include "a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect of the activity".

A description of the mitigation measures proposed is provided in the technical assessments appended to this AEE, summarised in the preceding subsections, are detailed within Section 8.8 of Volume 1 and are also documented in the proposed consent conditions within Volume 6.

Clause 6(1)(g) of Schedule 5 of the FTAA also requires that an AEE include *"if the scale and significance of the activity's effects are such that monitoring is required, a description of how the effects will be monitored and by whom, if the activity is approved"*

The monitoring that is proposed as part of the construction of the development is also documented in the proposed consent conditions.

5.18 Summary of Effects

The proposed subdivision and earthworks represent a suitable use of the subject site and will result in environmental outcomes that can reasonably be anticipated and accommodated on the site. The proposal will result in effects on the environment that are less than minor, subject to the recommendations stated in the various specialist reports. Appropriate mitigation measures and conditions have been identified and noted throughout this report.

The proposal represents an efficient use of the subject site, which has been zoned for residential intensification. The effects of the development are in keeping with the environmental outcomes that can reasonably be anticipated on the site, given its status in the AUP(OP) and the outcomes anticipated by the Wainui Precinct Plan.

As described above, there are significant positive effects from the development of the site. The earthworks will provide a landform that is stable and free from natural hazards. The works unlock the development of the site, enable the Wainui Project to be delivered at scale and pace, and ensure the residential and commercial yields are met, which formed the basis for the current and planned infrastructure investment. Finally, the works will promote housing supply and affordability by facilitating an increase in the supply of land for new housing.

Overall, the proposal is appropriate, and any actual and potential adverse effects on the environment of allowing the activity are less than minor.

6.0 Assessment of Relevant Statutory Considerations

This section of the application is provided in accordance with clauses 5(1)(h), 5(2) and 5(3) of Schedule 5 of the FTAA. The FTAA requires that applications must include an assessment of the activity against the relevant provisions and requirements of those documents listed in clause 2(2) being:

(d) a national environmental standard;

(e) other regulations made under the Resource Management Act 1991;

(f) a national policy statement;

(g) a New Zealand coastal policy statement;

(h) a regional policy statement or proposed regional policy statement;

(i) a plan or proposed plan; and

(j) a planning document recognised by a relevant iwi authority and lodged with a local authority.

6.1 National Environmental Standards

6.1.1 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011

Resource consents required under the NES-CS have been considered in Section 4.0.

The intent of the NES-CS is to provide a nationally consistent set of planning controls and soil contaminant values. It seeks to ensure that land affected by contaminants in soil is appropriately identified and assessed before it is developed and, if necessary, the land is remediated or contaminants contained to ensure the land is safe for human use.

The proposal meets the intent of the NES-CS as soil sampling undertaken as part of the DSI for the development (see Appendix 2H) identified elevated concentrations of arsenic, zinc and asbestos in located areas. Therefore, it is proposed to remediate these parts of the site and manage earthworks in accordance with the CSMP/RAP which will ensure that the site is suitable for the intended residential land use and for the health and safety of persons during works.

The SMP/RAP have been prepared in accordance with the requirements of the NES-CS. The recommendations included in the SMP/RAP will be followed during the site remediation works, and an SVR will be provided to the Council following the completion of remediation. Following the completion of remediation works, there will be no ongoing risk of contamination associated with the subject site. All lots created through Milldale Stages 10 - 13 will be suitable for development and safe for residential and commercial occupation and have no residual contamination risk.

Based on the above, as the site will be remediated, potential risks to human health will be appropriately managed, and it is considered that the intent of the NES-CS will be met.

6.1.2 National Environmental Standard for Freshwater 2020

Resource consents required under the NES-FM have been considered in Section 7.

The intent of the NES-FM is to set out requirements for carrying out certain activities that pose risks to freshwater and freshwater ecosystems. The NES-FM seeks to:

- Protect existing inland and coastal wetlands;
- Protect urban and rural streams from in-filling;
- Ensure connectivity of fish habitat (fish passage);
- Set minimum requirements for feedlots and other stockholding areas;
- Improve poor practice intensive winter grazing of forage crops;
- Restrict further agricultural intensification until the end of 2024; and
- Limit the discharge of synthetic nitrogen fertiliser to land, and require reporting of fertiliser use.

The proposal meets the definition of 'urban development' and of relevance to this application are:

- Regulation 45C(2) which notes that earthworks within a 10m setback from a natural inland wetlands for the purpose of constructing urban development is a restricted discretionary activity.
- Regulation 45C(4) which notes that the diversion of water within a 100m setback from a natural inland wetland for the purpose of constructing urban development where the proposal will change, or is likely to change, the water level range or hydrological function of the wetland is a restricted discretionary activity.
- Regulation 45C(5) which notes that the discharge of water within a 100m setback from a natural inland wetland for the purpose of constructing urban development where the proposal will change, or is likely to change, the water level range or hydrological function of the wetland is a restricted discretionary activity.

The effects of the proposal have been adequately assessed in Section 8 of this report above. Appropriate mitigation measures have been identified and provided for, to avoid any adverse effects to the health of freshwater and freshwater ecosystems.

Based on the above, the proposal is considered to meet the intent of the NES-FM. The objectives and policies of the NPS-FM are assessed below.

6.1.3 Other National Environmental Standards

The proposal does not require resource consents under any of the other National Environmental Standards, and therefore an assessment against the intent of these is not required.

6.2 National Policy Statements

6.2.1 National Policy Statement on Urban Development 2020

The National Policy Statement on Urban Development 2020 (NPS-UD) recognises the national significance of:

- Having well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future;
- Planning decisions improve housing affordability by supporting competitive land and development markets;
- Providing sufficient development capacity to meet the different needs of people and communities; and
- Improving how cities reposed to growth to enable improved housing affordability and community wellbeing.

The NPS-UD contains objectives and policies that require councils to carry out long term planning to accommodate growth and ensure well-functioning cities. There is an emphasis on allowing for growth 'up' and 'out' in a way that contributes to a quality urban environment and to ensure their rules do not necessarily constrain growth. Councils must also enable higher density development in areas close to employment, amenity, infrastructure and demand, and, in some instances, remove minimum car parking requirements.

Overall, the proposal is consistent with the NPS-UD for the following reasons:

- Objective 1 and Policy 1 seek to achieve a well-functioning urban environment that provides for a number of outcomes. The proposed subdivision and roading network contribute towards achieving a well-functioning urban environment as it will provide for transport linkages and residential lots to meet development capacity. It will support an increase in homes in an area identified for planned and future growth, close to transport links, employment, and commercial centres, including the Milldale Local Centre, open space and education facilities. The range in lot sizes proposed will support a range of households in needs in terms of type, price and location in an area close to key amenities. The proposed roading network will also support a well-functioning urban environment for all modes of transport.
- Objective 2 and Policy 2 direct local authorities to provide sufficient development capacity in the short, medium and long term to meet demand. The project will deliver 623 residential lots and 27 development-ready residential super lots, thereby making a real and sustained contribution to Auckland's housing supply. This will support improved housing affordability and support competitive land and development markets;
- In accordance with Objective 4, the project will facilitate a range of dwelling typologies and sizes anticipated within the residential lots and super lots. This will contribute to the creation of a diverse and vibrant community and assist in responding to the changing needs of people, communities and future generations;
- Policy 6 requires planning decisions to have particular regard to the planned urban built form, the benefits of urban development, contributions to development capacity, and the effects of

climate change. As discussed above in relation to Policy 2 the proposal contributes toward development capacity. The proposal is consistent with the scale and planned density of development sought through the Wainui Precinct and underlying zoning and will support housing choice and housing and business capacity.

- Policy 10 directs local authorities to achieve integrated land use and infrastructure planning, including additional infrastructure. The project will be fully serviced by development infrastructure and additional infrastructure, including the new primary school, Ahutoetoe school, which was opened in February 2023 to meet the educational needs of the community.
- Objective 8 requires New Zealand's urban environments to support reductions in greenhouse gas emissions and be resilient to the current and future effects of climate change. The proposal will complete existing sections of road and will provide a connected roading network with improved, safe and attractive active transport facilities for pedestrians and cyclists. This will reduce the reliance on car travel by providing more options for travel and supports a reduction in vehicle emissions.

6.2.2 National Policy Statement on Freshwater Management 2020

The National Policy Statement on Freshwater Management 2020 (NPS-FM) requirements include:

- Managing freshwater in a way that 'gives effect' to Te Mana o te Wai;
- Improving degraded water bodies, and maintaining or improving all others; and
- Avoiding any further loss or degradation of wetlands and streams, map existing wetlands and encourage their restoration.

The Resource Management (Freshwater and Other Matters) Amendment Act 2024 is now law. It states that for the purposes of Section 104, a consent authority must not have regard to clause 1.3(5) or 2.1 of the NPS-FM 2020, which relates to the hierarchy of obligations. Regardless, the more detailed objectives and policies of the NPS-FM, including those which have been carried through to the AUP(OP) are more relevant to the proposal.

A detailed assessment of the proposal against these objectives and policies is included below, which demonstrates that the proposal is in keeping with the NPS-FM. In summary:

- The NPS-FM recognises the need for urban growth and specified infrastructure while integrating and managing the effects of development on freshwater, ecosystems and the coastal environment. The proposed works are required to support the delivery of urban development in Auckland with measures proposed to mitigate and manage effects on adjacent freshwater bodies;
- The NPS-FM priorities the health and wellbeing of freshwater systems including water quality. The proposal seeks to ensure the water quality of downstream and adjacent freshwater systems in the catchment is maintained and improved. As detailed below, the proposed erosion and sediment control measures will ensure water quality is maintained during construction activities, and stormwater management and treatment devices will ensure that the quality of stormwater runoff to waterbodies is improved;
- As part of the proposal, a compensation package will enhance existing riparian margins within the project area, as well as the creation of new wetland extents and extensive restoration planting at an offset site within an existing ecological ecosystem within Milldale North. The

residual adverse ecological effects of the proposed wetland and stream reclamation will be offset by the significant enhancement planting proposed in order to achieve a no-net-loss in respect of extent and any degradation of overall ecological values. Accordingly, the proposed wetland reclamation is consistent with Objective E3.2(3);

- The proposed works are deemed necessary to prepare the site for the roading alignment detailed within the Wainui Precinct Plan, stormwater management approach and underlying Single House Zone, Mixed Housing Urban, Mixed Housing Suburban, Neighbourhood Centre and Open Space zoning. The earthworks modelling and flood levels have determined finished contours. The earthworks enable compliant roading gradients, building platforms, and infrastructure service levels. To maintain the structure of development determined by the Precinct Plan, to ensure logical connections to adjacent subdivision stages, to enable the stormwater attenuation requirements, and in order to provide for the most effective and economic use of the land, it is not practicable to avoid the reclamation of the identified wetlands, and reclamation and diversion of the identified intermittent streams throughout the project area;
- Furthermore, the area has been zoned for Residential and Business use. The block structure and road network design has been determined by a range of transport and infrastructural connections from adjacent stages as well as the surrounding natural features. The proposed public roads are required in the specified locations in order to meet the functional and operational needs of the wider roading network within the Wainui development. In light of this, the reclamation of wetlands and streams cannot be avoided;
- Retention of Milldale Stream and the diversion of streams throughout the development area will be enhanced with extensive riparian planting. These corridors will provide a space for public amenity as well as a pedestrian connectivity route to other stages within the subdivision;
- The wetland and stream offset is located as close as possible to the impacted site by involving significant replanting of the riparian margins throughout the development as well as creation of new wetland and enhancement of streams in Milldale North. The planting will achieve a net gain of ecological values. It will also result in significant ecological benefits and improved water quality for the local catchments;
- The proposal will manage the adverse effects on Mana Whenua cultural heritage if discovered on site and will comply with the protocol for the accidental discovery of kōiwi, archaeology and artefacts of Māori origin. Appropriate actions will be undertaken in accordance with mātauranga and tikanga Māori and any adverse effects will be avoided, remedied or mitigated where possible; and
- There are no practicable alternatives or methods to the proposed reclamations and diversions based on the aforementioned assessment and the planned zoning of the site as envisaged by the Precinct.

With regards to the effects management hierarchy, the assessment undertaken in Section 6.3.2.7 below applies in this instance as these are requirements to consider within Chapter E3 of the AUP(OP).

6.2.3 National Policy Statement on Indigenous Biodiversity 2023

The relevant objectives and policies of the National Policy Statement on Indigenous Biodiversity 2023 (**NPS-IB**) includes:

- Indigenous biodiversity is managed in a way that gives effect to Te Rito o te Harakeke;
- Significant indigenous vegetation and significant habitats of indigenous fauna are identified as Significant Natural Areas (**SNA**) using a consistent approach;
- The importance of maintaining indigenous biodiversity outside SNAs is recognised and provided for.

It is considered that the proposed development accords with the NPS-IB objectives and policies for the following reasons:

- Mana Whenua have been consulted throughout the development of the proposal as set out in the Overview Report (**Volume 1**). No concerns have been raised in relation to biodiversity;
- The Site has not been identified as an SEA or SNA. The closest SEA is located approximately 100m south-west of the Site;
- The Site does not present any features, fauna or flora habitats that present significant ecological values as referred to in the EIA; and
- The Site is currently vegetated with pasture, low lying shrubs and trees. The proposal will result in ecological gains through offset compensation planting and wetland creation, in conjunction with riparian planting within the subject site to aid in the restoration of the Site.

6.2.4 New Zealand Coastal Policy Statement 2010

As the proposed development is not located within close vicinity to the coastal environment, the New Zealand Coastal Policy Statement 2010 (**NZCPS**) is not relevant.

6.2.5 Other National Policy Statements

There are no other National Policy Statements that are relevant to the proposal.

6.3 Regional Policy Statement, Regional Plan and District Plan

The AUP(OP) comprises Auckland's Regional Policy Statement (**RPS**), as well as regional and district plans. An assessment of the proposal against the AUP(OP) is provided below.

6.3.1 AUP(OP) Regional Policy Statement

The Auckland Regional Policy Statement (**RPS**) sets out the overall strategic statutory framework to achieve integrated management of the natural and physical resources of the Auckland Region.

The RPS is contained within Chapter B of the AUP(OP). Section B1.4 of the AUP(OP) sets out the strategic framework for the identified resource management issues of significance for the Auckland region, and the policies and methods to achieve integrated management of the natural and physical resources. Section B2 specifically addresses objectives and policies relating to urban growth and form, with B3 addressing infrastructure, B6 addressing mana whenua values and Section B7.3 and B7.4 containing objectives and policies relating to freshwater systems and freshwater.

An assessment of the project against the RPS has been included in the Overview Report, with additional comments provided in relation to the Milldale Stage 10 – 13 provided below.

Overall, Milldale Stages 10 - 13 align with the objectives and policies of the RPS, particularly in supporting urban growth, infrastructure development, recognising mana whenua values and protecting freshwater management. Specifically:

- The proposed subdivision supports the delivery of a well-functioning urban environment with a quality compact urban form and contributes to an increase in housing supply in the Auckland region. The underlying Wainui Precinct and zoning of the site give effect to this RPS direction. The precinct and zoning anticipate residential intensification, and the density proposed through Milldale Stages 10-13 subdivision is in general accordance with this. The proposed earthworks will provide a suitable landform and gradient to enable future residential and commercial development to occur.
- Further, the proposed development is within walking distance to several open spaces, including the esplanade reserve approved to be established alongside Waterloo Creek, and the Milldale local centre. The proposed development can be adequately serviced by the proposed infrastructure and the necessary upgrades identified in the application.

It is therefore considered this proposal is consistent with the relevant objectives and policies of the RPS section of the AUP(OP).

6.3.2 AUP(OP) Objectives and Policies

As set out earlier in this report, the proposal is a non-complying activity under the AUP(OP). The proposed Milldale Stages 10 – 13 subdivision and associated activities have been assessed against the relevant objectives and policies of the AUP(OP) contained in the following chapters:

- I544 Wainui Precinct
- E3 Lakes, Rivers, Streams and Wetlands
- E7 Groundwater Take and Diversion
- E9 Stormwater Quality
- E11 / E12 Land Disturbance – Regional and District
- E15 Vegetation Management and Biodiversity
- E16 Trees in Open Space
- E17 Trees in Roads
- E25 Noise and Vibration
- E26 Infrastructure
- E27 Transport
- E30 Contaminated Land
- E36 Natural Hazards and Flooding
- E38 Subdivision
- E40 Temporary Activities

- H3 Residential Single House Zone
- H4 Residential Mixed Housing Suburban Zone
- H5 Residential Mixed Housing Urban Zone
- H7 Open Space Conservation Zone
- H12 Business Neighbourhood Centre Zone

6.3.2.5 I544 Wainui Precinct

The relevant provisions of the I544 Wainui Precinct chapter seek to ensure the delivery of a masterplanned community design to offer a variety of residential activities and housing typologies to be established around open space areas, neighbourhood centres and reserves. The key considerations to be addressed through the Wainui Precinct are the servicing of the development, including water, wastewater and integration with the wider transport network, and details on how servicing will be staged, funded, and delivered in a timely manner.

The proposal is in accordance with these provisions, including I544.2 Objective 1 and I544.3 Policies 1 – 4 for the following reasons:

- The proposed subdivision, including the location and design of road networks, pedestrian links, and open spaces are in general accordance with the Wainui Precinct Plan;
- Staging is proposed in order to coordinate the provision of infrastructure to each stage of the development;
- All lots will be serviced by a reticulated water, wastewater and stormwater and connected to a wider roading network;
- Stormwater runoff will be sufficiently managed and mitigated, with 21 stormwater dry basins proposed to manage stormwater runoff prior to entering the stormwater network. On-site mitigation devices (rain tanks) will be placed within future residential lots at the building consent stage, to achieve retention and detention requirements. This is in accordance with the approved SMP for the Precinct;
- The proposed subdivision has been designed to align with the provision of infrastructure. With regards to roading, the Traffic Report (Appendix 2N) demonstrates that the proposed roading layout and increase in traffic flow are acceptable and that the proposed subdivision can be adequately connected to the wider transport network. The proposal is able to accommodate transport demands and future growth that supports the Stages 10-13 development and the wider Wainui area;
- The subdivision will provide lots suitable for a range of housing types and densities to achieve an integrated, connected and high-quality suburban neighbourhood. Residential activities are focused around amenity areas, with high density super lots and open spaces located adjacent to the proposed stream corridor, Wainui Road arterial road and the Stream Edge Road near the Milldale Stream;
- The proposal does not infringe any of the permitted subdivision standards under I544.6. The standards relate to open space (this standard relates to the minimum width of esplanade reserve corridors) and infrastructure (staging of infrastructure); and

- Overall, it is considered that the proposed development is consistent with the objectives and policies of the Wainui Precinct. The proposed subdivision, open space and infrastructure works are infill works adjacent to existing approved stages of the Milldale development, which is consistent with achieving the outcomes of the Wainui Precinct Plan.

6.3.2.6 E3 Lakes, Rivers, Streams and Wetlands – General

The E3 Lakes, River, Streams and Wetlands chapter provisions recognise the importance of the management of the beds of lakes, rivers, streams and wetlands for the protection of natural ecological and biodiversity values, for the efficient passage of flood flows, and the retention of high water quality. Retaining the natural profile and course of a river or stream, keeping riparian vegetation and fish passage and avoiding sediment generation from bed disturbance supports the retention of freshwater ecosystems. There is a balance to be struck between the need to provide for the ongoing growth of urban Auckland, including the requirements of infrastructure, and the protection, maintenance and enhancement of lakes, rivers, streams and wetlands. It is important that development occurs in a sustainable manner which should involve, where practicable, the retention and enhancement of lakes, rivers, streams and wetlands.

The relevant objectives and policies for lakes, rivers, streams and wetlands are contained in Chapter E3 and include objectives 1-6 and 7, policies 1-5, 7-8, 13, 15, 17 & 18. The proposal is in accordance with these provisions for the following reasons:

- The proposed works have been designed to take into account and avoid adverse effects on areas of natural significance and high natural values. While Objectives E3.2(1) and (2) have a strongly protective element, there is a focus on wetlands with high natural values. The wetlands subject to this application do not possess high natural values. Instead, the EIA in Appendix 2C confirms that wetlands W1-W3 have low ecological values due to the high modification from agricultural practices, lack of structural tiers, very high dominance of exotic species, altered hydrology through historical drainage, and lack of aquatic habitat;

- As part of the proposal, a compensation package will restore, enhance, and create new wetlands and provide extensive restoration planting along existing streams within an existing ecological ecosystem within Milldale North. The residual adverse ecological effects of the proposed wetland and stream reclamation will be compensated for in order to achieve a no-net-loss in respect of extent and any degradation of overall ecological values. In this instance it is more ecologically beneficial to restore, enhance and maintain a wetland and stream system in Milldale North. Overall, the offset site works are considered to have net benefit to the ecology of the Auckland region despite the loss of ecological values across the Stages 10-13 impact site. Accordingly, the proposed stream and wetland reclamation is not contrary to Objective E3.2(3);

- The proposed works are deemed necessary to prepare the site for the planned residential density, public recreational area, local centre and roading alignment detailed within the Wainui Precinct Plan and underlying zoning. The earthworks modelling and flood levels have determined finished contours. The earthworks enable compliant roading gradients, building platforms, and infrastructure service levels. To maintain the structure of development determined by the Precinct Plan, to ensure logical connections to adjacent subdivision stages, and in order to provide for the most effective and economic use of the land, it is not practicable to retain or avoid the wetlands and streams within the earthworks area;

- Furthermore, the area has been zoned for Residential and Business use and identifies that intensive development activities are expected within the location of the natural features. The block structure and road network design in Stages 10-13 has been determined by a range of transport and infrastructural connections from adjacent stages including the Milldale Local Centre and Residential stages 4-9. The proposed public roads are required in the specified locations in order to meet the functional and operational needs of the wider roading network within the Milldale development;
- In light of the above, the reclamation of the wetlands and streams and the diversion of all intermittent streams cannot be avoided. The landform and layout of the proposed roads and pedestrian paths are influenced by the location and levels of the existing/consented road network, road layout and typologies indicated in the Wainui Precinct Plan, and topographic constraints of the site. With reference to Objective E3.2(6) and Policy E3.3(1) and (2) there are no practicable alternatives;
- Milldale Stream will be retained and enhanced in accordance with Objective E3.2(1) and in accordance with the outcomes anticipated by the Wainui Precinct Plan. This corridor will provide a space for public amenity as well as a pedestrian connectivity route to other stages within the subdivision;
- In accordance with Policy E3.3(4), the compensation project is located as close as possible to the impact site (1.4 kilometres to the west) and will achieve a net gain of ecological values. It will also result in significant ecological benefits for the local catchment and improved water quality for a tributary of the Orewa River;
- With reference to Policy E3.3(6), the proposal will manage the adverse effects on Mana Whenua cultural heritage if discovered on site and will comply with the protocol for the accidental discovery of kōiwi, archaeology and artefacts of Māori origin. Appropriate actions will be undertaken in accordance with mātauranga and tikanga Māori, and any adverse effects will be avoided, remedied or mitigated where possible;
- There are no practicable alternatives or methods to the proposed reclamation and diversion of several streams. The proposed design is based on topographical constraints and key roading connections in accordance with the Wainui Precinct and requires the diversions of a number of intermittent streams to achieve the anticipated zoning outcomes of the plan in accordance with the Objective E3.2(6) and Policy E3.3(13); and
- While policy E3.3(13) is directive, it is also inconsistent with Policy B7.3.2(4) of the RPS as discussed in the above assessment. The RPS provides that the permanent loss of wetland must be avoided unless it is necessary to provide for, amongst other things the sustainable use of land and resources to provide for growth and development. The RPS policy also provides for environmental benefits including onsite or offsite works where adverse effects cannot be mitigated. These policies appear to be inconsistent with Policy E3.3(13) which requires that reclamation is avoided except in certain contexts. Greater weight is given to the policies of the RPS whereby the proposal enables the development of a quality compact urban form within a zoned growth area of Auckland.

6.3.2.7 E3 Lakes, Rivers, Streams and Wetlands – Policy 17 and Policy 18

Within E3 Lakes, Rivers, Streams and Wetlands, Policies 17(b) and 17(c) are relevant to the loss of the wetlands within Stages 10-13, as the proposal involves constructing specified infrastructure

(being the public roading and pedestrian/cycle path network) and the overall development is for the purpose of urban development. Policy 18 is relevant to the loss of streams where there is a functional need in the specified locations. Given the similarities between the matters to assess outlined in Table 12 below, the following assessment has been combined for wetlands and streams against the policies.

Table 12: Inter-relation of Polic 17(b), 17(c) and Policy 18

Policy E3.3.17(b)	Policy E3.3.17(c)	Policy E3.3.(18)
The loss of extent of natural inland wetlands is avoided, their values are protected and their restoration is promoted, except where:		*The loss of river extent and values is avoided, unless the Council is satisfied:*
(i) the activity is necessary for the purpose of the construction or upgrade of specified infrastructure	(i) the activity is necessary for the purpose of urban development that contributes to a well-functioning urban environment (as defined in the NPS-UD)	-
(ii) the specified infrastructure will provide significant national or regional benefit	(ii) the urban development will provide significant national, regional or district benefits	-
-	(iii) the activity occurs on land identified for urban development in operative provisions of a regional or district plan	-
-	(iv) the activity does not occur on land that is zoned in a district plan as general rural, rural production or rural lifestyle	-
-	(v) there is either no practicable alternative location for the activity within the area of development, or every other practicable location in the area of the development would have equal or greater adverse effects on a natural inland wetland	-

(iii) there is a functional need for the specified infrastructure in that location	-	(a) that there is a functional need for the activity in that location
(iv) the effects of the activity are managed through applying the effects management hierarch	(vi) the effects of the activity will be managed through applying the effects management hierarchy.	(b) the effects of the activity are managed by applying the effects management hierarchy

Necessity of Activity for Specified Infrastructure and Urban Development

With respect to Policy 17(b)(i)-(ii) and 17(c)(i)-(ii) the reclamation of the wetlands is necessary for the purposes of the construction of public roads and pedestrian connections to link up to existing infrastructure within adjacent stages in the Milldale development. The proposed roading network aligns with the Wainui Precinct Plan and facilitates connectivity to the wider roading network and for the establishment of future urban development with a high level of legibility and walkability. The roading network is deemed specified infrastructure supporting the wider urban development across Stages 10-13.

The removal of the wetlands are necessary to create a well-functioning urban environment – inter-connected streets, well-connected cycling and pedestrian linkages, landform and contour that aligns with surrounding sites, landform free from flood hazards. The proposed subdivision design will facilitate a variety of homes and businesses. The development also has good accessibility between housing, jobs, community services, natural spaces, and open spaces, by way of public or active transport. The construction and delivery of Stages 10-13 contributes to Milldale's regional significance as a master planned community that incorporates restored streams, schools, reserves, a retirement village, commercial centres and new roading networks.

The scale of development being provided will provide significant regional benefits as supported by the Economic Report in **Appendix 2M**.

Location of Activity

With respect to Policy 17(c)(iii)-(iv), the wetlands are on land that is zoned and identified for urban development (both commercial and residential) and has a supporting precinct plan that identified local roads and key pedestrian linkages in these locations. The subdivision is not occurring on land that is zoned as general rural, rural production, or rural lifestyle.

Practicable Alternatives

The proposal is consistent with Policy 17(c)(v) and the relevant section 3.22 of the NPS-FM. As supported within the Urban Design Report in **Appendix 2L**, the Infrastructure Report in **Appendix 2F** and the Functional Need Memo in **Appendix 2U**, there is no practicable alternative but to reclaim the 16 wetlands across the Site.

Stages 1-9 and the Local Centre have been designed and consented in accordance with the masterplan and the Wainui Precinct. These stages have created key linkages and urban development structure set out in the Wainui Precinct Plan. Stages 10-13 is the final area within the core of the development that completes all of these key linkages. It is imperative the development is delivered as per the proposed layout in order to implement and complete these key linkages of the Wainui Precinct Plan. It is therefore not practicable to locate these transport links elsewhere.

Sufficient evidence has been provided to satisfy the Panel that there are no practicable options other than to reclaim the wetlands and that the design delivers the best possible design and configuration given the site constraints and opportunities. The supporting assessments lead to the conclusion that the reclamation of the streams and wetlands is necessary to deliver the residential and commercial development and that the proposed infrastructure must occur in the location of these features. There are no other locations available within the area of development that can achieve the same urban outcomes with regards to design and configuration, including density and placement of amenity areas relative to the wetlands.

As demonstrated in Table 13 below, the reclamation of the wetlands is required:

Table 13: Wetland Reclamation Practicable Alternatives Assessment

	Practicability of proposed activity and restoring and enhancing wetlands at Milldale North Offset Site	Practicability of retaining existing wetlands
Effective and efficient use of urban zoned land	Zoning and Wainui Precinct Plan can be cohesive and fully realised as detailed in the AUP(OP). Offset located within the rural zone. Therefore, does not conflict with efficient use of urban zoned land.	There are no practicable alternatives to achieve the same design/configuration/yield and location/enhancement of amenity. The commercial, residential and transport network activities cannot be replicated elsewhere in Milldale given that this development constitutes the final stages of the overall development.
Planned transport infrastructure	Transport infrastructure can continue to be delivered in accordance with Wainui Precinct Plan. The activity will connect completed/consented infrastructure with the outer ring roads of the Milldale development and complete the urban development as envisioned by the Precinct Plan. No urban infrastructure required at the offset site. No clashes with any planned infrastructure within the development site.	Conflicts with existing and required infrastructure. No practicable alternatives available to road locations. It is not practicable to leave the surrounding transport networks incomplete. This would lead to an incohesive environment.
Ownership and maintenance	Wetlands at the offset site will be privately owned and maintained. Responsibility remains with landowner in perpetuity.	Retained wetlands would need to vest in Council. Council would be responsible for ownership and on-going maintenance costs.

Accessibility	No access constraints and no public safety issues due to the restoration site being located on private property.	Wetlands difficult to access and maintain due to surrounding ground levels.
Wetland resilience	No significant ground works involved so resilient to natural processes.	Wetlands are located in difficult topography given surrounding ground levels.
Overall ecological outcomes	Overall, there is a net biodiversity gain and will result in a high quality outcome in a more suitable location. The wetland offset site is located in the same ecological catchment and will make a greater contribution to biodiversity and water quality in this location.	The existing wetlands have low ecological function and there is limited ecological gain given the degraded state and potential enhanced state.

Functional Need

'Functional need' is defined as "*the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment*" (in the National Planning Standards 2019, NPS-FM and the NPS-IB. The interpretation of 'functional need' in this context should be pragmatic and should consider the linear nature of infrastructure.

The proposal is consistent with Policy 17 and Policy 18 and the relevant Sections 3.22 and 3.24 of the NPS-FM. As detailed in the Functional Need Memorandum in **Appendix 2U** and supported by the Urban Design Memorandum in **Appendix 2L**, there is a functional need to reclaim the wetlands and reclaim and divert the upper reaches of the intermittent streams within Stages 10-13. The reclamation of these features is required for the following reasons:

- The Site contains the steepest topography within the entire Milldale development with a significant elevation difference between Cemetery Road Link/Wainui Road (72-82m RL) and Milldale Stream (48m RL). To achieve compliant level building platforms, road geometry and gradients and maintain safety in the roading network, roads have been designed parallel to contours and incorporating retaining walls and RE slopes. Retaining the wetlands and streams would require the construction of steeper roads and pedestrian routes that will not meet Auckland Transport gradient standards under ATCOP and would result in poorer safety outcomes;
- The design must accommodate multiple fixed constraints including the undeveloped 147 Argent Lane site (requiring minimized retaining walls while maintaining road gradients and providing future infrastructure connections), existing fixed levels from completed Milldale stages, and the need to maintain both the natural hilltop feature and Milldale Stream while creating suitable platforms for residential and commercial activities;
- The presence of unfavorable Northland Allochthon geology, combined with steep fixed gradients and numerous watercourses and wetlands across the site, necessitates a universal, cohesive and large-scale remediation approach rather than fragmented solutions, requiring the

removal of wetlands and realignment of intermittent streams to achieve the global site stability required for safe residential development;

- The installation of underfill drainage systems for intermittent streams, coupled with engineered fill across the site and within wetland areas, is essential for achieving global slope stability by providing confining loads with improved shear resistance. Captured water being redirected into diverted streams is also considered essential as a form of stream recharge;
- Despite the original Milldale masterplan and SMP being approved with 'at-source' stormwater detention through rain gardens within road reserves, Council's evolving directive now strongly opposes this approach in favour of centralised stormwater management systems, requiring the incorporation of several large detention devices throughout Stages 10-13 which significantly impacts the available land area for urban development;
- The strategic realignment and vertical adjustment of intermittent streams serves multiple functions. Directing overland flows to the Milldale Stream catchment to support stream recharge and habitat retention, ensuring compliant road gradients, and managing steepness challenges by softening slopes around the headwaters of retained streams, resulting in a more integrated and sustainable stormwater management approach;
- To deliver the roading layout, urban structure and intensity of development in accordance with the structure of the Wainui Precinct Plan. Any significant deviation from the masterplan will lead to an uncoordinated and ad-hoc development approach leading to various poor urban design and transport outcomes in respect of connectivity and access;
- The development demonstrates careful integration with the Wainui Precinct Plan while addressing complex site constraints. The specified collector road network has been largely maintained, though steep topography in Stage 13 necessitated one modification to a local road connection to meet the 8% maximum gradient requirement. The design successfully implements required open space corridors and stream edge roads along Milldale Stream, including provisions at the eastern boundary of Stage 12 adjacent to 147 Argent Lane. The main active transport corridor has been completed through Stage 11 to Wainui Road. Notably, these Precinct Plan requirements have been achieved while integrating with existing streams that were not originally identified for retention in the Plan, showcasing the development's ability to balance regulatory requirements with existing site conditions;
- The development's layout demonstrates a sophisticated response to the site's steep topography through its carefully considered block configuration. The design in Stages 12 and 13 incorporates wider curve patterns that follow natural contours, effectively balancing earthworks requirements while maintaining coherent urban form. The removal of wetlands across the Site enables a block structure that seamlessly aligns with both the existing pattern of Stages 10-13 and the broader Milldale development. This is critical to avoid the need for multiple curve-linear road sections that would have disrupted the established urban pattern. The implementation of a grid-based layout creates strong visual and physical connections to the existing street network, ensuring optimal legibility and permeability for urban navigation while meeting Precinct Plan requirements and integrating effectively with surrounding development areas;
- To facilitate the construction of road and pedestrian connections as identified in the Wainui Precinct Plan to ensure a high degree of connectivity and functionality. Extensive earthworks

are required to achieve compliant road geometry and gradients, and to enable the roads to tie into the location and levels of approved / existing roads and intersections in the adjacent roading/pedestrian network. The wetlands and streams are directly impacted by the filling and construction of roads/pedestrian connections. Retention of these features would interrupt and sever the planned transport links in the Precinct Plan and result in a disjointed roading design and decreased vehicular and pedestrian/cycling permeability and connectivity. It is not practicable to avoid adverse effects on the wetlands and streams due to their proximity to the existing and planned road network;

- To enable the intended land use of the subject site as defined in the AUP(OP) and to ensure the anticipated residential yields within Milldale are achieved to meet substantial demand in the Auckland Region. The delivery of housing supply is a key driver of current and future infrastructure planning and investment. Many of these infrastructure projects have been funded and constructed in partnership with the Crown Infrastructure Projects (CIP). This funding agreement is directly tied to housing supply and therefore it is necessary to deliver the specified amount of housing to honour and deliver this CIP agreement. Create public infrastructure in an efficient and logical manner that enables development, and infrastructure that can be maintained easily through ongoing rates collected from nearby properties.

On this basis, there is a functional need for the proposed roading to be in the planned locations and geometry based on the connections either side and the location/topography of Stages 10-13. Sufficient evidence has been presented to confirm the earthworks required to construct the roading network and building platforms for future urban development necessitates the removal of the wetlands across the site, and reclamation and diversion of the upper reaches of the intermittent streams.

Effects Management Hierarchy

With respect to Policy 17(b)(iv), Policy 17(c)(vi) and Policy 18(b), Table 14 and the subsequent discussion below provides an assessment against the Effects Management Hierarchy.

Table 14: Effects Management Hierarchy Assessment

Effects Management Hierarchy (as defined in the NPS FW) *In relation to natural inland wetlands and rivers, means an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that:*	Assessment
(a) Adverse effects are avoided where practicable.	As detailed above, reclamation of low value wetlands and the diversion and partial reclamation of the intermittent streams is unavoidable in order to deliver the outcomes anticipated by the Wainui Precinct and to complete the necessary road and pedestrian connections. The landform and layout of the proposed roads and walkways are influenced by the location and levels of the

	existing/consented road network, road layout and typologies indicated in the Wainui Precinct Plan, Auckland Transport standards, and topography constraints of the site. Therefore, no avoidance of adverse effects can be achieved. Adverse effects have been mitigated in part by mitigating the loss of the streams and wetlands' functional roles of flood attenuation and nutrient capture through the use of stormwater devices.
(b) Where adverse effects cannot be avoided, they are minimised where practicable.	For the reasons detailed in this report, it is not practicable to minimise the reclamation/diversion of streams and wetlands. The construction of key collector and local roads to the required location and gradient cannot occur without adverse effects. Retention of any wetlands and intermittent streams across the project area would result in a disjointed roading design and will restrict the potential for high intensity residential development.
(c) Where adverse effects cannot be minimised, they are remedied where practicable.	No remediation of adverse effects on ecological values is proposed.
(d) Where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible.	The EIA in Appendix 2C notes that Milldale North site is like-for-like when considering loss and benefits within the ecological system. The wetland and stream systems are within the Ōrewa River catchment, have similar plant composition, have been highly modified through agricultural practices, have a lack of structural tiers, and have a very high dominance of exotic species and lack aquatic habitat. The creation of the new wetland habitat and the extensive riparian enhancement of the streams at the offset site will result in a no-net-loss in wetland/stream extent, noting a marginal net gain of wetland extent of 0.05 ha. The additional planting will provide for a net biodiversity gain and will redress the potential ecological values lost due to the reclamation of the 16 wetlands and 1,028.5m of stream extent within the Stages 10-13 project area. In this regard, the Milldale North enhancement

	project represents a suitable form of compensation whereby the loss of one ecosystem is addressed by restoration of another ecosystem that will, in time, support a greater range of equally or more important conservation/ biodiversity values. In refence to the EIA in Appendix 2C, the proposed offset site results in a net-benefit to the ecology of the Auckland region, despite the loss of values at Milldale. The proposed offset site works involves: - Extending/joining the existing wetlands through the creation of new wetland; - Removal of two existing farm culverts to improve connectivity and fish passage; - 10m of restoration and planting works along both banks of the identified streams; - Planting the wetlands with appropriate native species and planting a 10m buffer with appropriate native species (in accordance with the landscape plans in Appendix 21) ; - Weed and pest control and stock proof fencing; and - Legal protection by way of a covenant around proposed area. On the matter of additionality, there are no requirements or other plans to create new or enhance the existing streams or wetlands at the Milldale North offset site. Therefore, the offset site proposed and associated enhancement works provide the necessary enhancements satisfy the additionality test. There are no other wetlands, culverted streams (in relation to daylighting), or suitable areas within the project area site to enhance or create new streams or wetlands. As such, the offset was required to be off-site. As noted previously the offset site within the Milldale North rural block is located 1.4 km to the north and both the impact and offset sites are located within the wider Ōrewa River catchment.

(e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; and	Not applicable as the residual effects from the loss of stream and wetland values are offset as detailed in (d) above.
(f) if aquatic compensation is not appropriate, the activity itself is avoided	Not applicable as the residual effects from the loss of stream and wetland values are offset as detailed in (d) above.

As detailed in the EIA in **Appendix 2C**, through the creation of new wetland habitat there will be a net gain (0.05 ha). The previously accepted WEV/ECR method has been applied as part of the calculation process to offset lost ecological value. The WEV/ECR includes consideration of the current and future states of the impact and offset site, including accounting for risk, uncertainty and time lag (i.e., through a 1.5 x multiplier). The overall result will be at a minimum no-net-loss to redress the potential ecological values lost at the impact site.

To effectively offset stream extent, one would need to either construct an entirely new stream or daylight existing streams that have been piped or culverted. However, the hydrological challenges of creating a new stream make this an unfeasible option, as it would require sourcing water from another catchment, potentially causing negative impacts on an existing watercourse. Additionally, within the site, the broader Milldale area, and the offset site, there is not enough piped or culverted stream available to adequately offset the lost stream extent. Given these challenges, offsetting was deemed impractical, and environmental compensation was considered the most suitable alternative.

To appropriately compensate for the loss of stream extent, extensive 10m riparian restoration of the retained streams within the Stages 10-13 site is proposed equating to 1,114.9m of stream length along with the removal of three culverts to improve connectivity and fish passage. Furthermore, extensive 10m riparian restoration of streams within Catchments 1, 2 and 3 within the offset site equating to 433.2m of linear length is proposed. This package of planting has been calculated from the SEV method which accounts for existing and future states of the impact and offset site streams, including accounting for delay and uncertainty (through a 1.5x multiplier).

Overall, in terms of following the mitigation hierarchy, the offset proposal is the most favourable in the current context. It is also noted that the AUP(OP) and the NES-FM does not require an exhaustive analysis of biodiversity compensation opportunities. Robust and achievable compensation proposals should not be discarded if they provide net ecological benefits which occurs in this case. The Milldale North offset project will provide for the restoration and enhancement of an existing stream and wetland system and represents a like-for-like scenario. Overall, based on the specialist reports and the above commentary, the effects management hierarchy has been applied appropriately, and Council can proceed to approving the consent.

Summary of E3 Policy 17(b), 17(c) and Policy 18 Assessment

Overall, the proposed partial reclamation and diversion of streams and full reclamation of the wetlands across the project area is not contrary to Objective E3.2(6) and Policies E3.3(13), E3.3(17) and E3.3.(18). The proposed stream and wetland reclamation is for the purpose of construction of specified infrastructure and for the purpose of urban development that contributes to a well-functioning urban environment. The wetland offset project at the Milldale North Offset Site will adequately restore and enhance a series of isolated and degraded wetland systems.

6.3.2.8 E7 Groundwater Take and Diversion

The objectives and policies in Chapter E7 refer to the objectives and policies located in E1 Water quality and integrated management, E2 Water quantity, allocation and use, D3 High-use Stream Management Areas Overlay and D8 Wetland Management Areas Overlay. These provisions seek to ensure freshwater and sediment quality is maintained, to prevent or minimise adverse effects of contaminants on freshwater and coastal water quality, to maintain the mauri of freshwater, to ensure the allocation and use of water meets current and future water needs and that surface river and groundwater aquifer limits are not exceeded. The proposal is consistent with the relevant provisions for the following reasons:

- Groundwater investigations prepared by WWLA **Appendix 2S,** have confirmed that the potential effects on groundwater and ground settlement will be localised. The groundwater level will not be reduced by more than 2m on the boundary of any adjoining sites that are not owned by the applicant. No permanent structures or services are located within the extent of drawdown;
- Groundwater induced settlement is not considered to be a risk beyond the subject site. The effects of ground settlement on buildings and infrastructure outside the subject site will be negligible or nil;
- Saltwater intrusion is not expected to occur due to the low permeability of the soils. The proposed works will not affect the seepage or base flow of any waterbodies;
- The proposed works will not increase the frequency or magnitude of flood events; and
- Silt and sediment control measures in accordance with GD05 will ensure that any adverse effects on adjoining waterbodies are avoided.

6.3.2.9 E11 Land Disturbance – Regional and E12 Land Disturbance – District

A combined assessment against Chapters E11 and E12 is provided below given the similarities between the provisions for regional and district land disturbance. The common outcome sought is to ensure that land disturbance is undertaken in a manner where the safety of people is protected and adverse effects on the environment are avoided, remedied or mitigated. This is supported by a range of policies which, generally, seek to manage the adverse effects of a sediment discharge on the environment, avoid adverse effects on natural, cultural and historic heritage where practicable, and design and undertake earthworks in a manner that ensures the stability and safety of surrounding land and buildings.

The proposal is considered to be consistent with these provisions for the following reasons:

- A suite of erosion and sediment control measures in line with GD05 will be implemented during earthworks to manage any potential adverse sediment discharge effects on the environment;
- An AMP approach to bulk earthworks is also proposed to address the management of sediment-related effects that may still occur when full compliance with the consent is maintained in order to avoid or minimise adverse effects on the receiving environment;
- The earthworks will be undertaken in a staged manner over multiple earthworks seasons to minimise the overall extent of exposed areas. Together with the implementation of appropriate erosion and sediment control measures, it is considered that sediment runoff or discharge will be suitably mitigated and minimised;

- Earthworks will be undertaken in accordance with the recommendations of CMW in their GIR (Appendix 2A). The proposed works methodology seeks to manage earthworks that will not create or exacerbate the risk of natural hazards, and to ensure that works are undertaken in a manner that protects the safety of people and ensures the stability and safety of the land and any structures; and
- There is one recorded archaeological site in the development area. An archaeological authority to destroy is sought for the removal of the site and as a precautionary matter for any accidental discovery within the site extent. The archaeological authority application is included in Volume 5.

Overall, it is considered that the proposal accords with the objectives and policies of the regional and district land disturbance provisions.

6.3.2.10 E15 Vegetation Management and Biodiversity

The relevant provisions of the E15 Vegetation Management and Biodiversity chapter seek to ensure that indigenous biodiversity is restored and enhanced in areas where ecological values are degraded or where development is occurring. There is an emphasis on managing the effects of activities to avoid significant adverse effects on biodiversity values as far as practicable. Where avoidance is not practicable then significant adverse effects should be minimised. The provisions also seek to avoid, remedy or mitigate any other adverse effects on indigenous biological diversity and ecosystem services, including soil conservation, water quality and quantity management, and the mitigation of natural hazards.

It is considered that the proposal is consistent with the relevant provisions for the following reasons:

- The proposed works are part of necessary site preparation to facilitate the increase in residential density and roading alignment set out within the Wainui Precinct and underlying zoning. The earthworks modelling and geotechnical constraints of the site (Appendix 2A) have further determined finished contours to achieve a cut to fill balance and subsequent roading gradients, building platforms, infrastructure service levels and requirements;
- The proposal minimises and avoids adverse effects on watercourses to be retained with high natural values, including the adjoining tributaries to Milldale Stream;
- As confirmed in the ecology report (Appendix 2C), any adverse effects on adjoining watercourses and wetlands, freshwater habitat and stream ecology will be very low;
- The proposal does not involve the removal of any areas of contiguous native vegetation. The proposal includes the removal of isolated clusters of exotic vegetation within 10m of streams and within 20m of wetlands (which will also be removed as part of the proposed development). The vegetation is of low ecological value, and the removal will not result in adverse effects on non-transitory, threatened, at-risk or rare indigenous species, ecosystems and vegetation types. The removal of the vegetation will not increase natural hazards. The removal of this vegetation will enable reasonable use of the site for future residential development; and
- Extensive riparian planting along the streams to be retained will provide significantly more and higher quality riparian vegetation than is currently present. Once established, the planned planting is expected to provide high levels of shade, organic matter inputs, bank stability,

filtration of overland flow, and provide habitat for native fauna, improving riparian functioning and water quality of the streams to be retained.

Overall, it is considered that the proposal accords with the objectives and policies of the Vegetation Management and Biodiversity provisions.

6.3.2.11 E16 Trees in Open Space Zones

The provisions of E16 Trees in Open Space Zones acknowledge the importance of trees in the open space zones as being an important public asset and need to be managed appropriately. As urban areas intensify, open space zones are relied on to a greater extent to provide amenity in these areas. Trees in the open space zones contribute towards Auckland being a desirable place to live and are an important part of Auckland's natural heritage and identity.

It is considered that the proposal is consistent with the relevant provisions for the following reasons:

- We have identified 137 trees growing within land zoned as open space and the riparian margins across Milldale Stage 10 – 13. It is proposed to remove a total of 135 trees and retain two trees with works within their PRZ. The tree removal is required to facilitate bulk earthworks across the site. As outlined in the Arborist Report as **Appendix 2B**, replanting at a ratio of 3:1 is proposed in order to offset the removal of existing exotic trees.
- At the completion of the development, planting of proposed reserves across the development is proposed to create high-quality public open spaces that will contribute to the overall amenity of the development for existing and future residents. As noted in the Arborist report, the replacement trees proposed will provide for increased landscape and ecological values in the area.

Overall, it is that the proposal is consistent with these provisions including E16.2 Objectives and E16.3 Policies.

6.3.2.12 E17 Trees in Roads and E26 Infrastructure

The provisions of E26 Infrastructure refer back to the objectives and policies under E17 Trees in Roads for works to or removal of trees in roads for infrastructure purposes. The provisions in E17 Trees in Roads seek to ensure that trees in roads that contribute to cultural, amenity, landscape and ecological values are protected and that development and use are balanced with the protection of trees in roads.

It is considered that the proposal is consistent with the relevant provisions for the following reasons:

- It is proposed to remove a total of 697 trees within the road reserve, with 474 of these trees requiring resource consent in order to facilitate the bulk earthworks required to facilitate Milldale Stages 10 - 13.
- As outlined in the Arborist Report as **Appendix 2B**, replanting at a ratio of 3:1 is proposed in order to offset the removal of existing exotic trees. The works are considered to be in accordance with the objectives and policies as the Arborist Report notes that the additional trees in roads will provide for increased landscape and ecological value for the area.

Overall, it is considered that the proposal accords with the objectives and policies of E17 and E26.

6.3.2.13 E25 Noise and Vibration

The E25 Noise and Vibration chapter acknowledges the adverse amenity impacts noise and vibration can have, depending on where and when they occur, their duration, physical characteristics (loudness and pitch), steadiness, and whether special audible characteristics are present. The objectives and policies for noise and vibration seek to control the levels of noise and vibration created by activities to limit the adverse effects of noise and vibration on amenity values and human health and to protect existing noisy activities from reverse sensitivity effects.

The proposal is considered to be consistent with these provisions for the following reasons:

- The proposal provides site management and mitigation measures to ensure people are protected from unreasonable levels of noise and vibration;
- The proposal ensures a robust design of the booster pump station building along with an acoustically effective fence adjacent to neighbouring residential properties to ensure the building is unlikely to be audible during the day and not cause annoyance or disrupt sleep at night; and
- With respect to the earthworks stage, the temporary duration of proposed works, hours of operation, and construction methodology take into account the sensitive environment and seek to avoid, remedy or mitigate effects on adjoining residential receivers as far as practicable. All residential owners and occupiers adjoining the works will be consulted with leading up to the commencement of works and advised when activities are to be carried out.

Overall, it is considered that the proposal accords with the objectives and policies of the noise and vibration provisions.

6.3.2.14 E26 Infrastructure

Infrastructure is critical to the social, economic, and cultural well-being of people and communities and the quality of the environment. The E26 Infrastructure chapter provides a framework for developing, operating, using, maintaining, repairing, upgrading and removing infrastructure. Additionally, it recognises the benefits that infrastructure can have a range of adverse effects on the environment, visual amenity of an area, and public health and safety.

The proposal is considered to be consistent with these provisions including E26.2.1 Objectives and E26.2.2 Policies, for the following reasons:

- Earthworks are necessary within the road reserve to facilitate the construction of new roads to service the Milldale Stage 10 - 13 development;
- The removal of trees in the road reserve are necessary to facilitate the construction of the Cemetery Road Link, which is currently an unformed paper road will deliver significant benefits for the transport network and deliver critical connections along the boundary of the Milldale development;
- The proposed roads have been located in accordance with the requirements of the Wainui Structure Plan, and to integrate with the existing stages of the Milldale development;
- The proposed roads have been designed to provide for the needs of all road users and modes of transport; and

- Construction effects will be managed through the proposed earthworks methodology as outlined above, ensuring that any potential adverse impacts of the earthworks on the receiving environment will be appropriately mitigated.

Overall, it is considered that the proposal accords with the objectives and policies of the infrastructure provisions.

6.3.2.15 E27 Transport

The relevant provision of E27 Transport seeks to encourage that land use and transport (including public transport, walking and cycling) be integrated in a manner that enables adverse effects of traffic generation on the transport network to be managed. In addition, the objectives and policies ensure that parking and access is designed, located and accessed safely and efficiently for pedestrians and vehicles within and outside the site.

The proposal is considered to be consistent with these provisions, including E27.2 Objectives 1 – 5 and E27.3 Policies 1, 20 and 21, for the following reasons:

- The proposed roading network has been designed to connect and integrate with the existing network. The new roads meet ATCOP standards, have been designed to accommodate the level of future traffic envisaged in the area and will maintain safety, operation and efficiency within the road network.
- The proposal complies with all other E27 standards that support the objectives and policies;
- The construction of Cemetery Road Link which is currently an unformed paper road will deliver significant benefits for the transport network and deliver critical connections along the boundary of the Milldale development;
- The proposed collector and local roads will deliver significant benefits for the transport network within the Milldale development. The proposed roads are consistent with the indicative locations shown in the Wainui Precinct Plan and are a key infrastructure required to enable the planned and future growth and development in the area;
- The layout and design of the roading network provides for the needs of all road users and modes of transport, including pedestrians and cyclists with shared pathways and dedicated cycle ways along collector roads;
- The proposed roads tie into the wider roading network to maintain traffic circulation and connectivity. The proposal will complete the missing sections of the existing/approved roading network within Milldale; and
- The layout and design of the roading network ensures that parking and pedestrian footpaths are readily accommodated within roads to provide for an acceptable level of accessibility to and within the subdivision.
- The development includes vehicle crossings within 10m of an intersection and exceeds the maximum requirements which infringe the standards of E27. These infringements are necessary to accommodate future developments on the proposed lots and cannot be avoided due to the design and layout of the Stages 10 – 13. A Traffic Assessment (Appendix 2N) has been carried out on these infringements and has confirmed that they will not result in any significant adverse traffic effects on the surrounding road network.

6.3.2.16 E30 Contaminated Land

The relevant objectives and policies seek to manage discharges of contaminants to protect the environment and human health and enable land to be used for suitable activities now and in the future.

The proposal is considered to be consistent with these provisions, for the following reasons:

- The discharge of contaminants from contaminated land into air, water, or land will be managed to protect the environment and human health via the measures outlined in the CSMP / RAP.
- The remediation of contamination hot spots on the site in accordance with the CSMP and RAP will enable the land to be used and developed for future residential and commercial purposes.

Overall, it is considered that the proposal accords with the objectives and policies of E30.

6.3.2.17 E36 Natural Hazards and Flooding

The relevant objectives and policies seek to ensure that use and development do not increase the overall risk of adverse effects from natural hazards to people, buildings, infrastructure and the environment, and where practicable, adverse effects are reduced or minimised. The design and construction of buildings and structures should assess whether the effects of flooding are avoided or mitigated through site layout and management.

The proposal is considered to be consistent with these provisions, for the following reasons:

- The risk from natural flood hazards has been assessed in the Stormwater Assessment within Appendix 2G where it was confirmed that significant adverse effects are avoided through the design of the development.
- It is confirmed within the Stormwater Assessment that overland flow paths present on site will be incorporated into the development, such that the development will not worsen any existing or create new flood risk hazards for properties upstream or downstream.

Overall, it is considered that the proposal will meet the relevant objectives and policies that relate to flooding hazards.

6.3.2.18 E38 Subdivision Urban

The relevant provisions of E38 Subdivision Urban seek to enable the process of dividing a site or a building into one or more additional sites or units or changing an existing boundary location. The relevant objectives and policies relating to the subdivision activity are contained in sections E38.2 and E38.3, and of relevance are objectives 1–10 and policies 1-4, 9-20 and 22.

The proposal is in accordance with these objectives and policies for the following reasons:

- The subdivision will facilitate subsequent residential and commercial development as anticipated by the underlying zoning and the Wainui Precinct Plan. The lots are an appropriate size and shape to enable future dwelling development to occur in accordance with the permitted bulk and location standards of the AUP(OP). The lots will provide for a mix of housing typologies, thereby providing for the long-term growth and needs of the Auckland region;
- The layout and design of the proposed subdivision scheme respond positively to street interfaces by promoting vehicle access to the rear of the site where applicable, in particular on super lots. This will provide for an active building frontage, a positive streetscape environment,

and avoid parking/vehicle access along the arterial road to create efficiencies for traffic flow and safety;

- The layout of the subdivision follows good urban design principles to ensure a legible, well-proportioned and quality environment is achieved. The block layout supports a walkable neighbourhood that is well connected to key open spaces including Milldale Stream and beyond to the wider Milldale spaces including Waterloo Creek, Milldale reserve and the Milldale town centre; Landscaping is proposed within the road reserve, pedestrian accessways and drainage reserves. This will result in the creation of high-quality public spaces;
- The elevation of the residential lots and associated retaining wall structures have been designed to maintain amenity values, adequate sunlight and daylight access on adjacent residential lots and on the local road network. The super lots will be raised to provide passive surveillance and overlook the public domain. Fencing located above the retaining walls will be low in height and visually permeable to minimise and reduce any shading or dominance effects;
- The layout of the subdivision has considered future development opportunities on the wider site area to ensure adequate, legible and integrated connections to the wider infrastructure and roading network are facilitated, not precluded;
- The subdivision manages the risk of adverse effects resulting from natural hazards. All lots will have a suitable and stable ground contour for future housing development that is free of hazards, including flooding and overland flow. The primary stormwater network will convey flows up to the 10-year ARI peak flow plus allowance for climate change. Overland flows will be contained within new roading in order to convey flows to the reticulated stormwater network. This will provide a defined path for flow to be away from residential properties. The proposed earthworks will not increase flooding within the subject site or to adjoining properties; and
- All lots will be serviced by a reticulated water, wastewater, stormwater supply and roading network. Water, power and telecommunication connections will also be provided to each lot.

6.3.2.19 E40 Temporary Activities

The objectives and policies for temporary activities are enabling for such activities to occur but seek to ensure that adverse effects on the environment are minimised, managed and mitigated.

The proposal is considered to be consistent with these provisions, for the following reasons:

- In the context of this proposal, the temporary construction activities will effectively be bulk earthworks required to facilitate a new residential development including associated roading, infrastructure neighbourhood parks and esplanade reserves to vest. It is considered that adverse construction noise and vibration and construction traffic effects arising from the temporary construction activities proposed will be appropriately managed with best practicable measures in response to and in recognition of surrounding site conditions and will also be minimised where practically possible.
- Pedestrian safety will also be maintained and prioritised over the course of construction by implementing traffic management procedures and hoarding/fencing to enclose the construction site to ensure their safe movement is maintained.

Overall, it is considered that the proposal will meet the relevant objectives and policies that relate to temporary activities.

6.3.2.20 H3 Residential – Single House Zone

The H3 Residential – Single House chapter provisions aim to maintain and enhance the amenity values of established residential neighbourhoods in a number of locations and in greenfield areas, provide housing choices for future residents. To support the purpose of the zone, multi-unit development is not anticipated, and it is generally characterised by one to two storey high buildings consistent with a suburban built character.

The relevant objectives and policies relating to the Residential – Single House are contained in sections H3.3.2 and H3.3.3. It is acknowledged that the level of development contemplated for the super lots to Wainui Road and within the proposed Neighbourhood Centre in Stage 12 is not consistent with the level of development contemplated by the objectives and policies of the Single House Zone, being a planned suburban residential character of predominantly one-two storey buildings (H3.2(2)). However, on balance, and in the context of the wider FTAA, RMA and AUP(OP) considerations, in our view, this is an appropriate and efficient outcome for the following reasons:

- The Single House zone was initially applied to the edges of the Milldale development, adjacent to the Future Urban zone, to create a transition between higher-density development within the central area and the rural land beyond. However, with structure planning advancing north of Milldale and a Plan Change lodged to urbanise Milldale North, maintaining low-density housing as a transition on the northern edge is no longer considered to be necessary.
- Future development on superlots within the SHZ will be controlled through compliance with the RDOC by way of consent notices imposed on the ROTs. The RDOC will ensure that future development is of a suitable size and scale to achieve the built form outcomes that are in line with the density anticipated across the superlots. Confirmation that these outcomes are achievable have been assessed by the lot testing within the Urban Design Report (Appendix 2L).
- The Neighbourhood Centre has been relocated from the western part of the development to the north-western area, near Cemetery Road Link. This change is based on an economic assessment of Milldale's development and the growing demand for commercial areas as new stages have been completed (refer to Appendix 2M for the Economics Report). The commercial activities in this zone will provide for the community's social and economic wellbeing while keeping in with the scale and intensity of the surrounding development. Additionally, it is not anticipated to detract from the established Local Centre.
- Development infringements in the Single House zone across Stage 10 – 13 include retaining walls in front yards, and combined retaining walls and fencing on front, side and rear yards. These walls are necessary to create suitable site contours to enable future residential development and to support the roading network. While retaining walls have been minimised where possible, some are unavoidable. Overall, it is considered that the retaining walls and fencing will not detract from the overall amenity of the Single House Zone.
- The proposal is, in general, keeping with Milldale's existing and planned built character and will create lots that will provide quality on-site amenity for residents and adjoining sites and streets once they are developed.
- Development within the Single House zone will achieve attractive and safe streets and public open spaces by providing for passive surveillance, optimising front yard landscaping and

enabling high quality design of dwellings to minimise the need to have front facades dominated by garage doors.

- Future development of the lots and superlots within the Single House zone is anticipated to be of a height, bulk and form that maintains and is generally in keeping with the character and amenity values of the existing and proposed stages of the Milldale development. The lots have been sized to enable development to have useable and accessible outdoor living spaces and ensure they achieve a reasonable level of sunlight access and privacy and minimise visual dominance effects to adjoining sites. While the density of development will be greater than that anticipated by the underlying Single House zone, it will be residential and, therefore, consistent with the anticipated land use.
- As the Milldale zoning was established before urban development began, zone boundaries do not always align with proposed lot boundaries. Blanket consents addressing these discrepancies are not considered to undermine the underlying zoning but instead provide certainty for the applicant and future lot owners regarding development potential and relevant controls.

6.3.2.21 H4 Residential – Mixed Housing Suburban

The H4 Residential – Mixed Housing Suburban chapter provisions aim to enable intensification whilst retaining a suburban built character. Development within the zone will generally be two storey detached and attached housing in a variety of types and sizes to provide housing choice.

The relevant objectives and policies relating to the Residential – Mixed Housing Suburban are contained in sections H4.2 and H4.3. The proposal is in accordance with these objectives and policies for the following reasons:

- The Mixed Housing Suburban Zone is generally located on the outer edge of the Milldale development, adjacent to the Open Space – Conservation zone and the Single House zone. This serves as the initial transition from the high-density core of Milldale out to the lower density on the edge of the development area. Stages 10 – 13 have generally followed this zoning pattern, providing a density of lots that generally enable a lower density of development while still achieving a range of housing choices.
- Overall, it is considered the proposal is generally in-keeping with Milldale's existing and planned built character and will create lots that will provide quality on-site amenity for residents and adjoining sites and streets once they are developed.
- Development within the Mixed Housing Suburban zone will achieve attractive and safe streets and public open spaces by providing for passive surveillance, optimising front yard landscaping and enabling high quality design of dwellings to minimise the need to have front facades dominated by garage doors.
- Development infringements in the Mixed Housing Suburban zone across Stages 10 – 13 include retaining walls in front yards, and combined retaining walls and fencing on front, side and rear yards. These walls are necessary to create suitable site contours to enable future residential development and to support the roading network. While retaining walls have been minimised where possible, some are unavoidable. Overall, it is considered that the retaining walls and fencing will not detract from the overall amenity of the Mixed Housing Suburban Zone.

- A number of superlots have been proposed within the Mixed Housing Suburban zone which will facilitate future integrated residential development. Superlots have been located in areas with higher amenity values, including being adjacent to the proposed drainage reserves, which will contain the enhanced riparian margins of the existing streams within the development. Lot testing for the superlots confirms that they can be developed to meet the development controls of the zone and will achieve positive urban design outcomes as identified within the Urban Design Report Appendix 2L.
- Future development of the lots and superlots within the Mixed Housing Suburban zone is anticipated to be of a height, bulk and form that maintains and is generally in keeping with the character and amenity values of the existing and proposed stages of the Milldale development. The lots have been sized to enable development to have useable and accessible outdoor living spaces and ensure they achieve a reasonable level of sunlight access and privacy and minimise visual dominance effects to adjoining sites.
- The Milldale zoning was established before urban development began, resulting in zone boundary anomalies that do not always align with lot boundaries. Blanket consents addressing these discrepancies are not considered to undermine the underlying zoning but instead provides certainty for the applicant and future lot owners reading development potential and relevant controls.

6.3.2.22 H5 Residential – Mixed Housing Urban Zone

The H5 Residential – Mixed Housing Urban chapter provisions aim to enable high-intensity urban development. The zone anticipates development typically up to three storeys in a variety of sizes and forms, including detached dwellings, terrace housing and low-rise apartments. This supports increasing the capacity and choice of housing within neighbourhoods as well as promoting walkable neighbourhoods, fostering a sense of community and increasing the vitality of centres

The relevant objectives and policies that relate to the proposal are contained H5.2 and H5.3. The proposal is in accordance with these provisions for the following reasons:

- The MHU provisions seek to ensure that land near high-density residential areas and close to the public transport network is efficiently used for higher density residential living and to provide urban living that increases housing capacity and choice and access to public transport.
- The proposed stream diversion and stream and wetland reclamation across the project area will better enable residential development that is in keeping with the zone's planned density and character. The development focuses on protecting and enhancing high-quality streams and wetlands that will contribute to the amenity of the area and provide improved recreation opportunities for future residents.
- Overall, it is considered the proposal is, in general, keeping with Milldale's existing and planned built character and will create lots that will provide quality on-site amenity for residents and adjoining sites and streets once they are developed. The Mixed Housing Urban zoned lots are located close to the Milldale town centre, enabling them to maximise the proximity to local amenities and enabling a higher density of development.
- Development within the Mixed Housing Urban zone will achieve attractive and safe streets and public open spaces by providing for passive surveillance, optimising front yard landscaping and

enabling high quality design of dwellings to minimise the need to have front facades dominated by garage doors.

- Development infringements in the Mixed Housing Urban zone across Stages 10 – 13 include retaining walls in front yards and combined retaining walls and fencing on front, side and rear yards. These walls are necessary to create suitable site contours to enable future residential development and to support the roading network. While retaining walls have been minimised where possible, some are unavoidable. Overall, it is considered that the retaining walls and fencing will not detract from the overall amenity of the Mixed Housing Urban Zone.
- A number of superlots have been proposed within the Mixed Housing Urban zone which will facilitate future integrated residential development. Superlots have been located in areas with higher amenity values, including being adjacent to the proposed drainage reserves, which will contain the enhanced riparian margins of the existing streams within the development. Lot testing for the superlots confirms that they can be developed to meet the development controls of the zone and will achieve positive urban design outcomes as identified within the Urban Design Report in Appendix 2L.
- Future development of the lots and superlots within the Mixed Housing Urban zone is anticipated to be of a height, bulk and form that maintains and is generally in keeping with the character and amenity values of the existing and proposed stages of the Milldale development. The lots have been sized to enable development to have useable and accessible outdoor living spaces and ensure they achieve a reasonable level of sunlight access and privacy and minimise visual dominance effects to adjoining sites.
- The Milldale zoning was established before urban development began, resulting in zone boundary anomalies that do not always align with lot boundaries. Blanket consents addressing these discrepancies are not considered to undermine the underlying zoning but instead provides certainty for the applicant and future lot owners reading development potential and relevant controls.

6.3.2.23 H7 Open Space – Conservation Zone

The H7 Open Space chapter sets out the framework for providing for and managing open space. The majority of land zoned as open space is vested in the Council or is owned by the Crown. However, some areas zoned open space are privately owned. While the open space zones generally provide for public use, some privately owned, or Crown-owned sites may restrict public use and access. A portion of the site is located within the Open Space Conservation zone which applies to open spaces with natural, ecological, landscape, and cultural and historic heritage values. The relevant objectives and policies relating to the open space conservation zone are contained in section H7.4.2 and H7.4.3.

The proposal is considered to be in accordance with these objectives and policies for the following reasons:

- The proposed development within the OSZ is a result of the zone boundary placements between urban and open space zones on the AUP(OP) maps. The Milldale zoning was established before urban development began, leading to anomalies in zone boundaries that do not always align with lot boundaries.

- The resolution of development within the open space zone for future development on the individual lots with split zoning has been proposed through blanket land use consents. The blanket land use consents confirm the development controls that will apply to the whole lots and will be secured by way of consent notices on the titles. Additionally, this also provides for future fencing on front boundaries along with the construction of vehicle access and parking areas.
- Sufficient open space has been provided across the Milldale development, and the small OSZ areas within Stages 10 - 13 that will be developed for residential purposes are not expected to significantly impact the overall objectives of the OSZ.

6.3.2.24 H12 Business – Neighbourhood Centre Zone

The H12 Business – Neighbourhood Centre Zone chapter provisions aim to enable the development of single corner stores or small shopping strips located in residential neighbourhoods. Smaller commercial developments provide residents and passers-by with frequent retail and commercial service needs. Provisions typically enable development up to three storeys high and residential use at upper floors is permitted. The relevant objectives and policies relating to the Business – Neighbourhood Centre zone are contained in section H12.2 and H12.3.

The proposal is considered to be in general accordance with these objectives and policies for the following reasons:

- The Neighbourhood Centre has been relocated from the western part of the development to the north-western area, near Cemetery Road Link. This change is based on an economic assessment of Milldale's development and the growing demand for commercial areas as new stages have been completed (refer to Appendix 2M for the Economics Report). The commercial activities in this zone will provide for the community's social and economic wellbeing, while keeping in with the scale and intensity of the surrounding development. Additionally, it is not anticipated to detract from the established Local Centre.
- Given the relocation of the Neighbourhood Centre within Milldale Stages 10 – 13, the part of the site zoned Neighbourhood Centre will need to be developed for alternative uses. Given the presence of existing streams across the development, a large part of the Neighbourhood Centre zone will be vested with the Council as a Local Purpose (Drainage) Reserve. The remainder of the zone will be developed in accordance with the Mixed Housing Urban zone provisions.
- Whilst the Neighbourhood Centre has been reduced, this change is based on an economic assessment of Milldale's development that confirms that there is a significant oversupply of Neighbourhood Centre zoned land. The reduced size of the Neighbourhood Centre will foster a stronger network of local amenities and ensure its long-term viability.
- The resolution of residential development within the lots with an underlying Neighbourhood Centre zone has been resolved through blanket land use consents. The blanket land use consents confirm the Mixed Housing Urban zone development controls will apply to the lots. This will be secured by way of consent notices on the titles.

6.3.3 AUP(OP) Assessment Criteria

The AUP(OP) specifies the relevant assessment criteria to be considered in assessing this application for each of the consent matters in the chapters identified in 7.3.2 above. These criteria largely cover the same matters that have been discussed and assessed in the above report, pertaining to environmental effects and the objectives and policies of the AUP(OP).

In particular, the proposal is generally compliant with the AUP(OP) standards, and where there are non-compliances, appropriate mitigation measures have been proposed through management plans, works methodologies, or conditions of consent.

Overall, the proposal meets the assessment criteria of the AUP(OP) for the reasons described in sections 7.0 and 8.0 above.

6.4 Treaty Settlement and Iwi Management Plans

Matters relating to Treaty Settlements and iwi management plans are addressed in the Overview Report contained in Volume 1.

6.5 Section 106 Assessment

The RMA sets out additional circumstances when a consent authority may refuse subdivision consent. To this end:

- The site is not subject to any of the natural hazards referred to in s106 as detailed in the body of this report and associated appendices.
- Sufficient provision has been made for legal and physical access to each allotment created by the subdivision.

Therefore, the subdivision does not raise any concerns that might prompt the consent authority to invoke the s106 provisions.

6.6 Statutory Considerations Summary

Overall, the application is considered to be consistent with, and not contrary to, the applicable provisions of the relevant National Environmental Standards, National Policy Statements and the AUP(OP).

7.0 Conclusions

This part of the overall proposal involves the development of Stages 10-13 of the Milldale development. Collectively, Stages 10-13 will provide for capacity of approximately 919 detached and terraced dwellings and supporting commercial services in the form of a compact Neighbourhood Centre.

A series of public open spaces are proposed, as well as supporting transport and three waters infrastructure. Based on the above report and information included in the Overview Report (Volume 1), it is considered that:

- Appropriate consultation and engagement have been undertaken with Auckland Council, including Auckland Transport and Watercare, Mana Whenua, and the Administering Agencies;
- Consideration of planning documents recognised by relevant iwi authorities and lodged with Auckland Council has been undertaken;
- Having considered the actual and potential effects of the proposal, the proposal will generate only minor adverse effects that, subject to appropriate conditions of resource consent, will be avoided, remedied or mitigated;
- The proposal accords with the relevant AUP(OP) objectives, policies and assessment criteria;
- The proposal meets the requirements of the NES-CS and NES-FM;
- The proposal accords with the NPS-UD, NPS-FM and NZCPS;
- The proposal achieves the purpose of the FTAA to facilitate delivery of infrastructure and development projects with significant regional or national benefits;
- The proposal is considered to be consistent with Parts 2, 3, 6, and 8 to 10 of the RMA; and
- The proposal is considered to be consistent with the purpose, principles, and relevant sections of the NZHPT Act.

It is therefore concluded that the proposal satisfies all matters the EPA is required to assess, and that it can be granted consent under the FTAA subject to conditions.