

The background of the cover is a photograph of a rolling green landscape at dawn or dusk. The hills are covered in lush green grass, and there are several trees scattered across the terrain. A layer of mist or fog hangs in the valleys between the hills. The sky is a mix of soft blues and oranges from the low sun. A large, semi-transparent blue triangle is overlaid on the right side of the image, pointing towards the top right corner.

BRYMER FARMS

INFRASTRUCTURE REPORT

PROJECT INFORMATION

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EXECUTIVE SUMMARY

1. The Project

Brymer Farms is a comprehensively planned, multi-staged residential development on an approximately 81-hectare greenfield site in northern Temple View, Waikato District. The project will deliver approximately 1,048 residential units —including around 248 apartment units — across a range of housing typologies from terraced and duplex dwellings through to larger lot-residential lots. Two mixed-use commercial hubs (C1 and C2) will provide approximately 2,184 m² of ground-floor commercial gross floor area with 40 apartments above, forming a neighbourhood-scale centre within the development.

The site is bisected by low-lying terrain underlain by Holocene peat deposits, flanked by rolling hills of Pleistocene silts and clays to the north and south. A network of open drains forming part of the Ohote drainage scheme runs through the centre of the site. These ground conditions — particularly the peat — are a defining constraint that has shaped both the earthworks strategy and the staging logic of the entire development.

The project is the subject of a Notice of Decision by the Minister (4 September 2025) to refer the Project under the Fast-Track Approvals Act 2024. This Infrastructure Report, together with its supporting technical assessments and appended specialist reports, accompanies the Substantive Application and demonstrates the engineering feasibility of servicing the development for earthworks, roading, stormwater, wastewater, water supply, power, communications, and gas.

2. A Staged Development Framework

The development is structured across twelve civil stages plus a large lot-residential precinct (Stage 1A), enabling subdivision, land use, and infrastructure works to proceed progressively while ensuring each stage is appropriately serviced. The staging strategy is driven by three practical realities: the need to manage peat settlement through preloading before construction can commence in low-lying areas; the sequential delivery of trunk infrastructure from the site periphery inward; and the phased negotiation of network capacity with Hamilton City Council (HCC) and IAWAI.

Stages 1–5 occupy the northern and central portions of the site and are the first to be delivered. Commercial Hub C1 and the central park are delivered as part of Stage 5, establishing an early neighbourhood focal point. Stages 6–11 cover the southern and eastern areas, with the remaining commercial hub (C2) and the two apartment blocks (A1 and A2) delivered in Stage 10, once the surrounding residential catchment is established and trunk infrastructure is in place. Stage 12 is a discrete precinct in the north-east. Stage 1A, comprising eight large lot-residential lots in the far north, is serviced independently via on-site wastewater treatment and bore water supply.

3. Earthworks and Peat Management

Geotechnical investigations by CMW (August 2026) confirm that peat underlies most of the low-lying areas within Stages 1–11. These unconsolidated soils are susceptible to significant settlement under loading and shrinkage from dewatering. The peat management strategy employs preloading with on-site cut material or imported fill, with periodic monitoring until allowable settlement is achieved. In localised cases — such as the footprint of Wastewater Pump Station B and the Stage 1 modified drain — the peat will be undercut and replaced with engineered fill. Groundwater recharge via on-lot soakage will be used to maintain peat moisture content and prevent post-construction shrinkage.

Total bulk earthworks across the 73-hectare disturbance area involve approximately 670,000 m³ of cut and 755,000 m³ of fill, yielding a net shortfall of roughly 198,000 m³ that will require imported

material. Erosion and sediment control will comply with Waikato Regional Council's TR2009-09 guidelines, with controls established prior to earthworks commencing.

4. Three Waters Infrastructure

Wastewater

Wastewater servicing is the most infrastructure-intensive element of the project. Following a strategic workshop with HCC and IAWAI (February 2026), four connection options were evaluated. The preferred solution routes a rising main from the central Wastewater Pump Station B (WWPS B) south and east along the internal road network to Grandview Road, then north-east to a new receiving manhole outside 91A Grandview Road, with a new gravity trunk main connecting to the Western Interceptor at the Grandview Road / Avalon Drive intersection (manhole WWP15002).

Wastewater modelling by WSP (July 2026) assessed the impact of the development's peak wet weather flow (44.67 L/s across all catchments) on the HCC network under multiple demand and modelling scenarios. The results showed no local manhole overflows under any scenario; however, the base 2061 projection indicates the pipe network directly upstream of the Grandview wastewater pump station is approaching full capacity, warranting ongoing monitoring.

Servicing is staged: Stage 1 (118 lots) will use an interim rising main from WWPS B to the existing Grandview Road WWPS receiving manhole. From Stage 2 onward, the ultimate rising main to the Western Interceptor will be constructed and the interim main abandoned. Three pump stations serve the development — WWPS A (Stages 6–11), WWPS B (Stages 1–5, central), and WWPS D (Stage 12) — each with minimum 9-hour emergency storage in accordance with RITS. Stage 12's lower lots will be serviced by a low-pressure sewer network. Stage 1A will use decentralised on-site wastewater treatment.

Water Supply

Water supply modelling by Mott MacDonald (August 2026) assessed two demand scenarios against HCC's Level of Service criteria. The key finding is that the Dinsdale Reservoir's effective storage volume is already below the required 18 hours at 115% of peak day demand and must be addressed. Subject to that constraint being resolved, the modelling confirms that up to 135 additional lots can be serviced via a single-ended connection on Ayrshire Drive, and up to 551 lots via dual connections on Ayrshire Drive and Brymer Road.

The staged water strategy provides: Stage 1 — a new 1800D PE100 watermain from the existing 150 mm main on Ayrshire Drive; Stages 2–3 — a 2250D PE100 connection from the existing 200 mm main on Grandview Road, looped to the Stage 1 main; Stages 4–12 — a new 6-million-litre Brymer water reservoir within the Stage 6 area, fed by a 6300D bulk main from Brymer Road, with a 3150D distribution main serving the southern stages. Firefighting supply is designed to FW2 (residential) and FW3 (apartments and commercial hubs) in accordance with SNZ PAS 4509:2008.

Stormwater

A Stormwater Management Plan (SMP) has been developed in accordance with Waikato Regional Council's RITS and Land Drainage Plan. The system employs a treatment train of on-lot soakage for the Water Quality Volume, piped conveyance for up to the 10-year ARI event, and overland flow paths within road corridors for the 100-year ARI event. Artificial wetlands in each catchment provide water quality treatment, extended detention ($1.2 \times \text{WQV}$), and peak flow attenuation, with post-development discharges limited to 80% of pre-development levels. A HEC-RAS 2D flood model confirms the development maintains flood immunity, with only minor exceedances expected to be resolved at detailed design. Stormwater soakage also serves a dual function in peat areas, contributing to groundwater recharge to mitigate peat shrinkage.

5. Transport and Rooding

The rooding network, designed to Austroads and RITS standards, comprises primary and secondary collector roads (25.8 m and 23.3 m corridors) and local roads (19 m and 16.8 m corridors), all with asphaltic concrete surfacing over granular pavement. A new two-way bridge over the existing council drain on Road 1 will connect the southern and northern stages; two options are under consideration (an 18 m combined bridge or a 14.5 m bridge with a separate cycleway crossing). The network incorporates dedicated bi-directional cycleways (3.5 m wide) on collector roads, footpaths on both sides of all roads, recessed on-street parking, and public transport routes linking to Whatawhata Road and Grandview Road. An Integrated Transportation Assessment by Transplan confirms the traffic and transportation effects are manageable. Temporary construction access will be via Whatawhata Road (SH23), with secondary access off Brymer Road.

6. Utility Services

WEL Networks, Tuatahi First Fibre and Firstgas have each confirmed they can service the development for power, communications, and gas respectively. A key enabling work is the undergrounding of the existing 33 kV overhead power line that traverses the site between poles 547378 and 547375, to be relocated within a dedicated easement and road service trench. Detailed utility designs will be progressed during the detailed design phase in collaboration with each provider.

7. Conclusion

The Brymer Farms development is an infrastructure-led project. The engineering assessments demonstrate that all three waters, transport and utility services can be feasibly delivered through a logical, risk-managed staging programme. The key infrastructure moves — a central wastewater pump station with a staged rising main to the Western Interceptor, a new 6 ML water reservoir to supplement the constrained Dinsdale Reservoir, an integrated stormwater system that doubles as peat management and a connected multi-modal transport network — collectively provide a robust servicing framework for approximately 1,048 homes and 2,184 m² of commercial space.

Residual matters requiring resolution at detailed design or through ongoing stakeholder engagement include: the Dinsdale Reservoir capacity upgrade; confirmation of downstream wastewater network capacity; detailed peat management and groundwater recharge design; the road bridge option selection; and finalisation of utility designs with network providers. None of these are considered impediments to the feasibility of the development. Subject to the proposed conditions of consent and the staged delivery framework, the project can proceed without generating adverse effects on existing infrastructure or the receiving environment.

1. Introduction

1.1. Background

Maven Waikato Limited have been engaged by Brymer Farms Ltd to undertake the infrastructure design and assessment in support of the Brymer Farms residential development (“The Project”).

1.2. Purpose of this Report

The purpose of this report is to provide an assessment of infrastructure associated with the Project. The information provided herein outlines the proposed infrastructure, demonstrates the engineering methodology and feasibility and assess infrastructure related effects associated with the proposed infrastructure onsite. This report is to be read in conjunction with the engineering drawings and calculations and is to accompany the Substantive Application under the Fast-Track Approvals Act 2024.

1.3. Site Description

The Project is a circa 81ha block of land within the Waikato District. The area is located in northern Temple View and west of Grandview Heights.

The site topography is split with low lying terrain through the centre of the site and rolling hills to the north and south, with elevations ranging between 38m and 50m. The site adjoins with the existing residential housing to the east, and the remainder of the site is surrounded by agricultural land. The site has been predominantly utilised for pastoral grazing, with land cover comprising maintained grassland consistent with agricultural use.

A network of closely spaced open drains run through the centre of the site from east to west, that discharge to the central drains, that form part of the Ohote drainage scheme. The central drain flows from east to west through this development. The



Figure 1: Site Locality

1.4. Legal Descriptions

The development site is currently split into five major parcels of land, which are summarised in Table 1 below:

Lot Description	Area (m ²)
Allot 365 Pukete PSH	1,444
Part Lot 2 DP 18355	183,753
Lot 1 DPS 87291	579,170
Lot 22 DPS 79526	677
Lot 3 DP 385271	44,890

Table 1: Legal Descriptions

1.5. Summary Proposal

The Project is a comprehensively planned, multi-staged residential development providing for the urbanisation and subdivision of the project site. The Project is the subject of a Notice of Decision by the Minister, dated 4 September 2025, to refer the Project. It seeks the land use, environmental, subdivision and associated infrastructure consents required to enable the development to be delivered progressively and in a coordinated manner.

The Project will provide approximately 1,048 residential units, including approximately 248 apartment units, across a range of housing typologies and densities. Housing will comprise a mix of terraced, duplex and detached dwellings, conventional and compact residential lots, irregular lots, and eight larger lot-residential lots. This range of typologies is intended to provide housing choice while enabling the development pattern to respond appropriately to the physical characteristics, environmental features and constraints of the site.

The master plan also provides for two mixed-use commercial sites, identified as C1 and C2, which will form a neighbourhood scale commercial component within the development. C1 will provide approximately 910 m² of ground-floor commercial gross floor area (GFA), with 24 two-bedroom apartments above. C2 will provide approximately 1,274 m² of ground-floor commercial GFA, with 16 two-bedroom apartments above. Both sites will incorporate basement car parking, dedicated vehicle access, servicing areas and landscaping. Collectively, C1 and C2 will provide approximately 2,184 m² of commercial GFA and 40 apartments, supporting the day-to-day needs of residents and contributing to a mixed-use neighbourhood environment.

The development will be supported by the necessary transport and three-waters infrastructure. Water supply and wastewater servicing will connect to the IAWAI reticulated networks, with internal reticulation and associated infrastructure established progressively as development is staged. This may include pump stations, storage, reservoirs and mains, where required. Stormwater will be managed through an integrated stormwater management system, with discharge ultimately occurring to the receiving environment within the Waikato District. The stormwater system will incorporate appropriate treatment, attenuation and conveyance measures and will integrate, where appropriate, with proposed wetlands, watercourses, stormwater reserves and other water-sensitive design features throughout the development.

Implementation of the Project will require staged development related earthworks to establish suitable building platforms, a well-connected road network, infrastructure corridors, reserves and other components of the master plan. These works will include site formation, cut and fill, retaining, erosion and sediment control, and other enabling works required to facilitate the staged subdivision

and development of the site. The proposal will also require the undergrounding of existing power lines within the Applicant's site.

A significant component of the Project is the provision and enhancement of open space and ecological values. The development will provide an integrated network of public and recreational open spaces, pedestrian connections, wetlands, watercourses, stormwater reserves, landscaped areas and retained vegetation. Environmental and ecological mitigation and offsetting will also be provided where required to address effects arising from the development and to support the protection, restoration and enhancement of ecological values across the site and wider receiving environment. Where appropriate, these measures will be integrated with the development's open-space and stormwater networks.

The overall open-space and movement network will connect with the surrounding urban environment and existing reserves, including Rakautahi Park, Brymer Glen Reserve, Brymer Park and Te Kootii Park. These connections will provide links between residential neighbourhoods, commercial and community areas, recreational spaces and the wider transport network.

Overall, Brymer is a large scale, comprehensively planned urban development that will enable approximately 1,048 residential units, including approximately 248 apartments, together with approximately 2,184 m² of commercial GFA. The Project encompasses the subdivision and development of the land and the associated development related earthworks, transport and access infrastructure, water supply and wastewater connections to the IAWAI reticulated networks, stormwater management and discharge, ecological mitigation and offsetting, landscaping, open space, recreation, and other supporting infrastructure necessary to establish the new community.

The Project will be implemented through a multi-staged consenting and development framework, enabling subdivision, land use and infrastructure works to proceed progressively while ensuring that each stage is appropriately serviced and integrated with the wider development and surrounding environment.

The development will be subject to a comprehensive suite of proposed conditions of consent, including a design guide, developed with input from the Applicant's relevant technical and environmental specialists. These conditions will provide the framework for managing the construction, staging, servicing and operation of the development, including earthworks, transport, three-waters infrastructure, stormwater discharges, ecological effects and offsetting, landscaping and open space, and other potential environmental effects associated with the Project.

Collectively, the master plan, supporting technical assessments and proposed conditions of consent provide an integrated framework for the staged delivery and management of Brymer, including measures to avoid, remedy or mitigate adverse environmental effects and, where appropriate, provide environmental offsets.

The Brymer Farms Masterplan prepared by Barker and Associates is shown in Figure 2 below and in Appendix D.



Figure 2: Barkers and Associates Masterplan

2. Earthworks

Earthworks will include re-contouring, excavations for the construction of the drainage reticulation, drainage infrastructure, services, formation of building platforms, roading and formation of any required retaining walls. The site will contain specific erosion and sediment control measures suitable to control the earthworks area. Refer to the Earthworks drawings in Appendix B for further details.

2.1. Geotechnical Investigation

Site-specific geotechnical investigations have been undertaken by CMW, and a geotechnical investigation report was prepared by CMW on 7th August 2026, to support the fast-track substantive application. Refer to Appendix F for the CMW GIR report for further details.

The report identifies the approximate distribution of prevailing landforms and geologies for the local area. The site is partially underlain by Holocene Swamp deposits in the valleys, through most of these areas underlying peat was encountered. The rolling hills to the north and south, comprised of Pleistocene aged silts and clays. The groundwater table was generally encountered within 1m below the ground surface. The average topsoil depth calculated from the test pits undertaken by CMW was 200mm across the site, however we have adopted 300mm depth of topsoil as the topsoil will blend with some of the upper clay layers when it is being removed.

From the ground investigations undertaken by CMW, geology is summarised in Table 2 and 3 below.

Geology	Unit Description	Top of Unit (mBGL)		Thickness (m)	
		Min	Max	Min	Max
Colluvium (debris deposits)	Stiff to very stiff Clayey Silt and medium dense Sand	0.2	0.3	0.8	4.3
Peat (Swamp deposits)	Firm to very stiff fibrous organic Peat	0.0	0.2	0.3	2.7
Piako Subgroup	Very soft to very stiff Clayey Silt and medium dense Sand interbedded with minor organic Silt layers	0.2	2.5	0.2	7.5
Hinuera Formation	Loose to medium dense Sand with interbedded stiff to very stiff Silt, and lenses of Organic Silt	0.2	7.2	5	12.0
*Note: encountered in TP25-01 and TP25-05 only					

Table 2: Summary of Strata Encountered – Low lying Areas

Geology	Unit Description	Top of Unit (RL m)		Thickness (m)	
		Min	Max	Min	Max
Hamilton Ash	Stiff to hard Clayey Silt and Silty Clay	0.2	0.3	0.5	3.0
Walton Subgroup	Stiff to Hard Clay/Silt and dense to very dense Sand	0.2	0.3	0.9	>25.6

Table 3: Summary of Strata Encountered – Elevated Areas

CMW have prepared a geomorphology plan to show the existing predominate underlying soils identified within the site, which is shown in Figure 3 below.

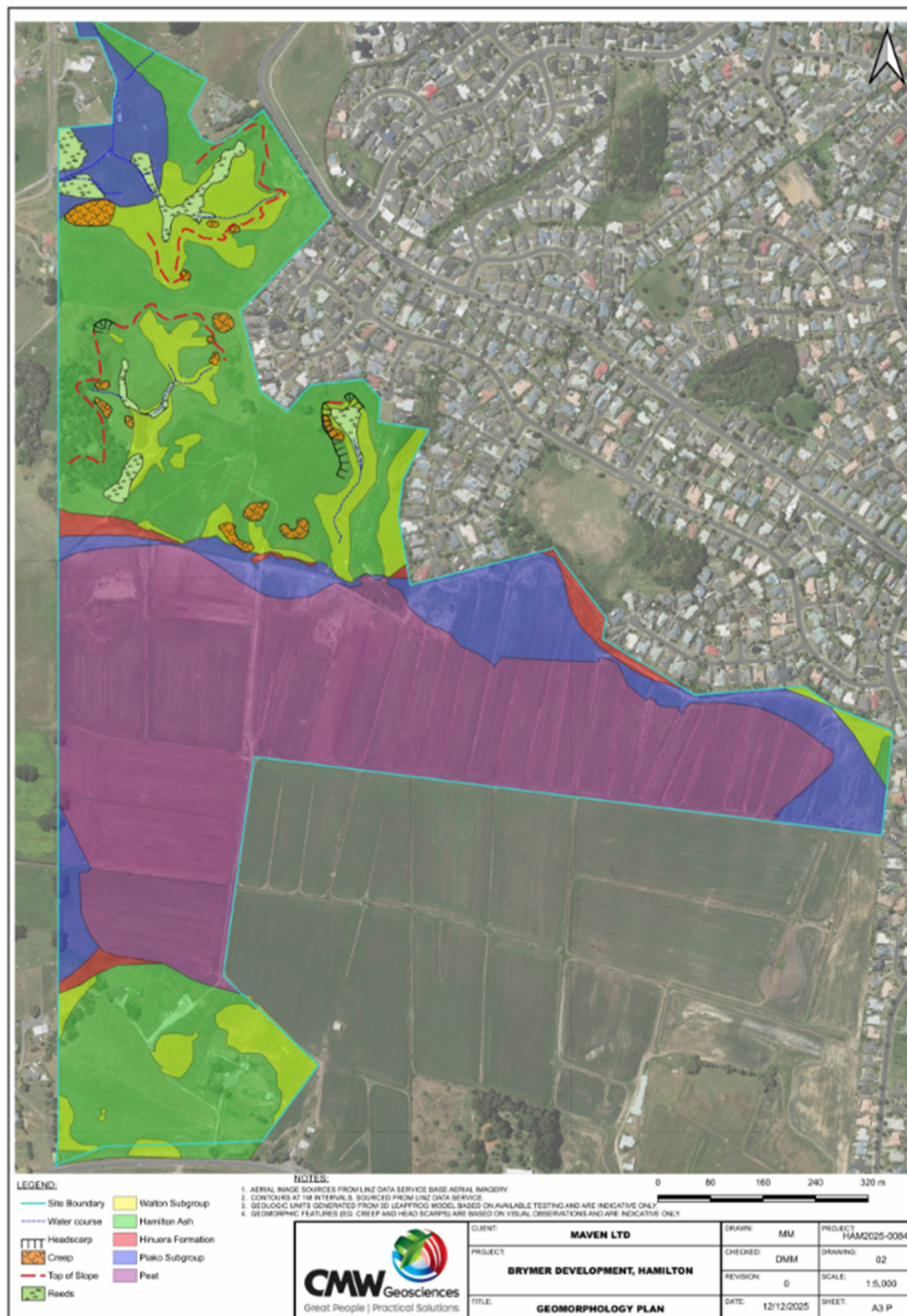


Figure 3: CMW Geomorphology Plan

2.2. Low Lying Peatland

From geotechnical investigations onsite, underlying peat deposits have been identified through most of the low-lying areas within Stages 1-11. The peat is a characteristic deposit of the Waikato Basin and is described as unconsolidated soils and therefore are susceptible to significant settlement when subjected to loading or dewatering. They can be susceptible to flooding and shrinkage.

2.3. Development in Peatland

To enable development where underlying peat soils are present, the peat soils will need to be managed to prevent future shrinkage and settlement. If the peat layers are shallow, the peat soils could be undercut and removed and then replaced with suitable filling material.

To manage the peat settlement for Brymer Farms, these areas would be preloaded with either existing onsite cut material or imported metal. The preloaded areas would be periodically monitored until the allowable ground settlement has been achieved, determined by the geotechnical engineer.

To prevent peat shrinkage, groundwater recharge will be required to manage the water content within the peat layers during construction and post construction. CMW have prepared a peat management plan that will provide further details for managing the peat across this site, for the construction phase.

2.4. Peat Management Strategy

Areas identified with underlying peat areas will be preloaded or in some special cases the underlying peat will instead be undercut. The wastewater pump station B (WWPS B) will need to be established as part of the Civil Stage 1 works. The peat will need to be undercut for constructing the WWPS B, which will include removing the surrounding peat areas located within the zone of influence of WWPS B. Where the peat soils are removed, they will be replaced with approved engineering fill material.

The Stage 1 modified drain will be constructed during the Civil Stage 1 works, and part of this drain will have underlying peat soils. The underlying peat soils will need be removed and then replaced with approved engineering fill material. Groundwater recharge will be provided through ground soakage, from onsite soakage from the proposed lots where applicable. Refer to the peat management drawings in Appendix B and refer to the peat management section in the earthworks management plan for further details.

2.5. Bulk Earthworks

A conservative allowance of 300 mm topsoil has been adopted based on geotechnical bore logs indicating approximately 220–250 mm, with a 1:1 fill factor retained; the additional topsoil allowance will be blended with underlying clay to optimise the available fill material and effectively achieve an estimated 1.15 fill factor.

The total bulk earthworks for whole site are summarised in Table 4 below:

Bulk Subgrade Earthworks (topsoil stripping exclusive)	
Total area of ground disturbance	701,185.9 m ² (70.12ha)
Total volume of FILL	899,961.6 m ³
Total volume of CUT	603,251.7 m ³
Total Volume (shortfall of FILL)	296,710 m ³
Others	
Topsoil stripping (300 mm)	210,355.8 m ³

Table 4: Summary of Bulk Earthworks

Please refer to the Brymer Farms - Earthwork Management Plan for sub-staged earthworks cut and fill balances. Refer to the Earthworks Management Plan (EMP) for further details. The EMP covers the earthworks staging and the proposed erosion and sediment controls. For the overall bulk earthworks, some additional fill material will need to be imported to site to achieve an overall earthworks balance for this development.

Upon completion of the proposed earthworks onsite, the geotechnical engineer will be required to prepare an Earthworks Completion Report. This report will certify the adequacy of the earthworks, and it will also provide recommendations for the foundation designs for the proposed lots within this development.

2.6. Erosion and Sediment Control

Prior to commencing earthwork operations, it is expected that a pre-construction meeting with the WRC monitor team will take place. During this meeting, the erosion and sediment control measures will be discussed and confirmed to ensure that the potential impacts of earthworks and erosion are effectively mitigated. Sediment and erosion control measures will need to be established onsite prior to commencing the earthworks operations.

It is expected that all erosion and sediment control measures will comply with TR2009-09 - Guidelines for Soil Disturbing Activities for the Waikato region. For a comprehensive understanding of the specific application of sediment and erosion control measures for each area of earthworks, please refer to the Construction Management Plan (CMP) which provides detailed guidance on these measures.

Two new commercial hubs C1 and C2. C1 will be constructed in Stage 6 and C2 will be constructed in Stage 10. The Commercial Site 1 (C1) and Commercial Site 2 (C2) site layout plans, prepared by Nine Thirty are shown in Figures 4 and 5 below. The proposed infrastructure has been designed to service these proposed commercial hubs, for stormwater, wastewater, water supply, power, communications and gas services. Further details for the commercial hub will be provided during the detailed design stage.



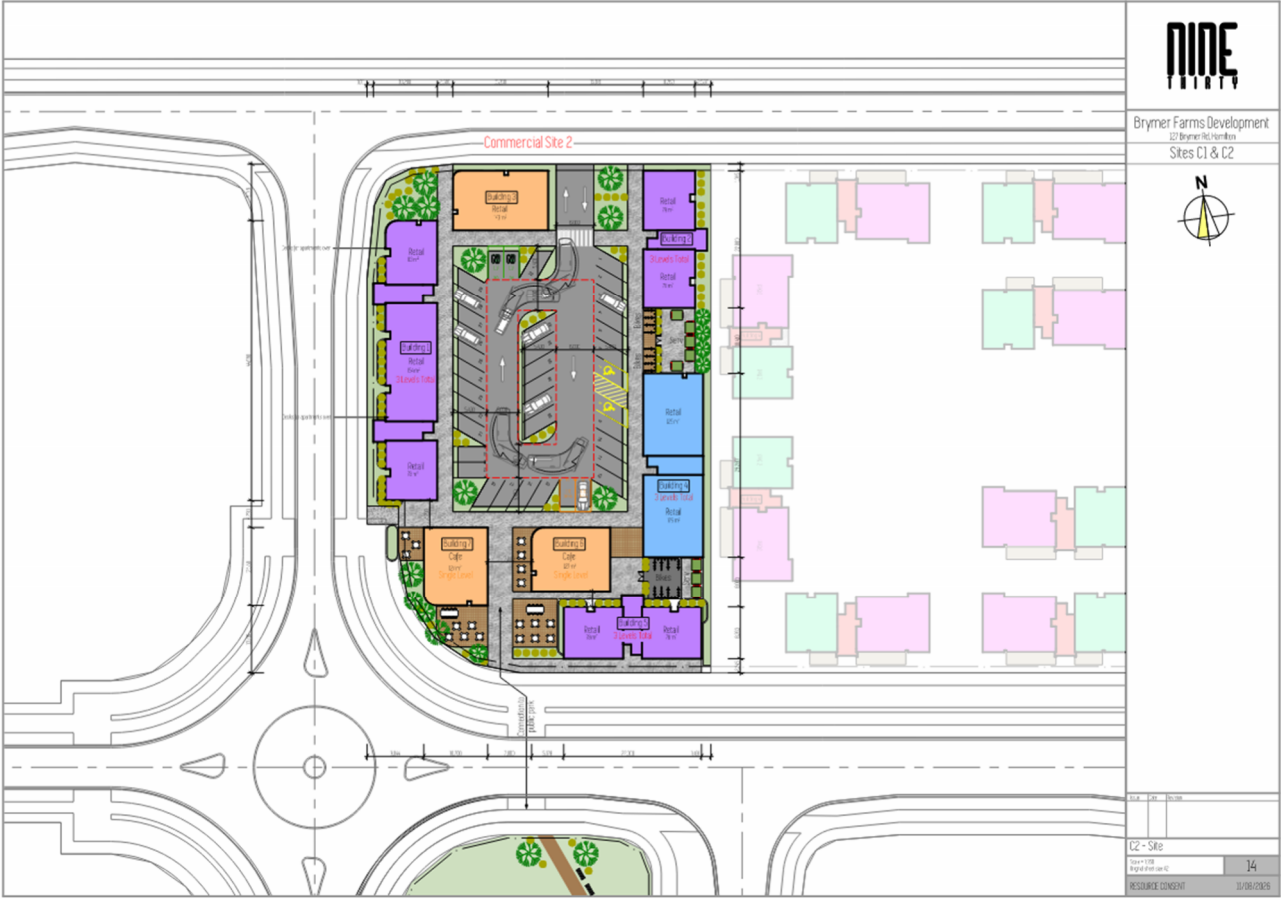


Figure 5: Commercial Site 2 (Nine Thirty)

4. Apartment Blocks

Two new apartment blocks A1 and A2, will be established during Stage 10. The Apartments Site 1 (A1) and Apartments Site 2 (A2) site layout plans, prepared by Nine Thirty are shown in Figures 6 and 7 below. The proposed infrastructure has been designed to service these proposed apartment blocks, for stormwater, wastewater, water supply, power, communications and gas services. Further details for the apartment blocks will be provided during the detailed design stage.

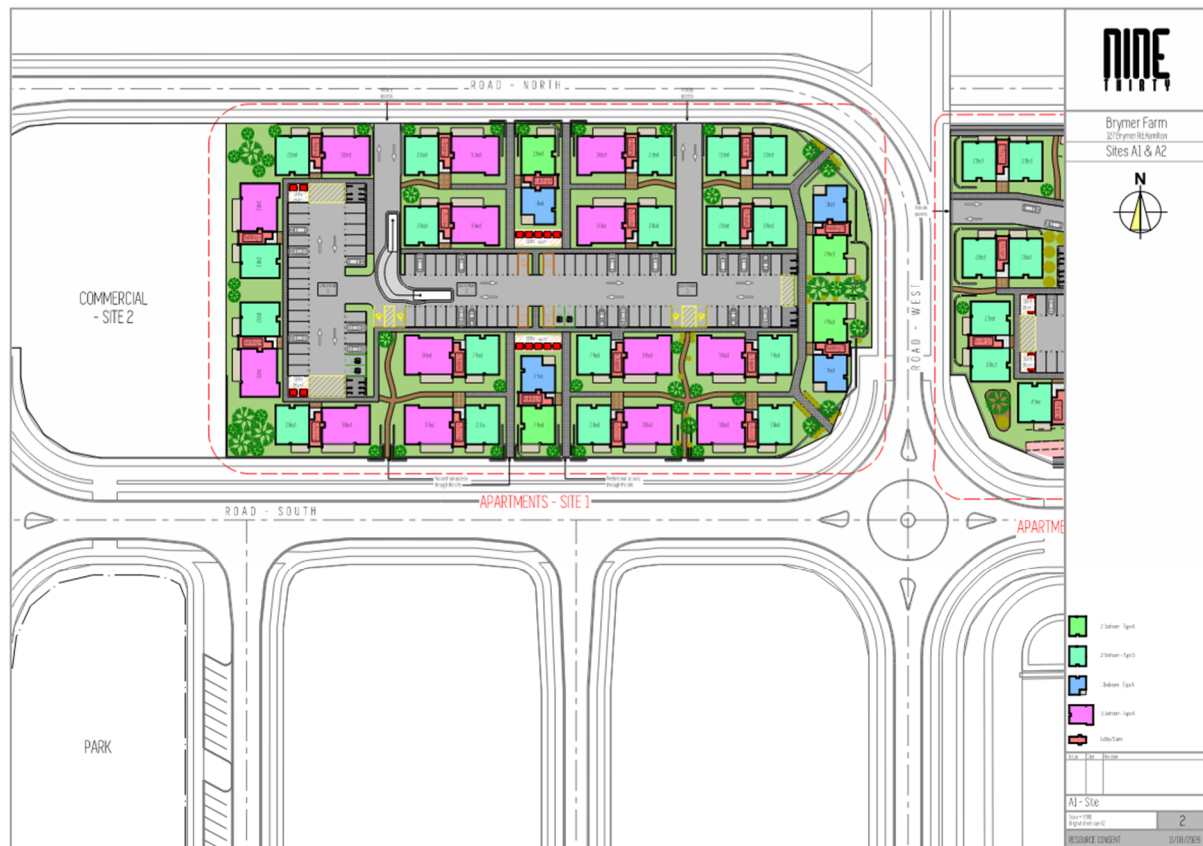


Figure 6: Apartments Site 1 (Nine Thirty)

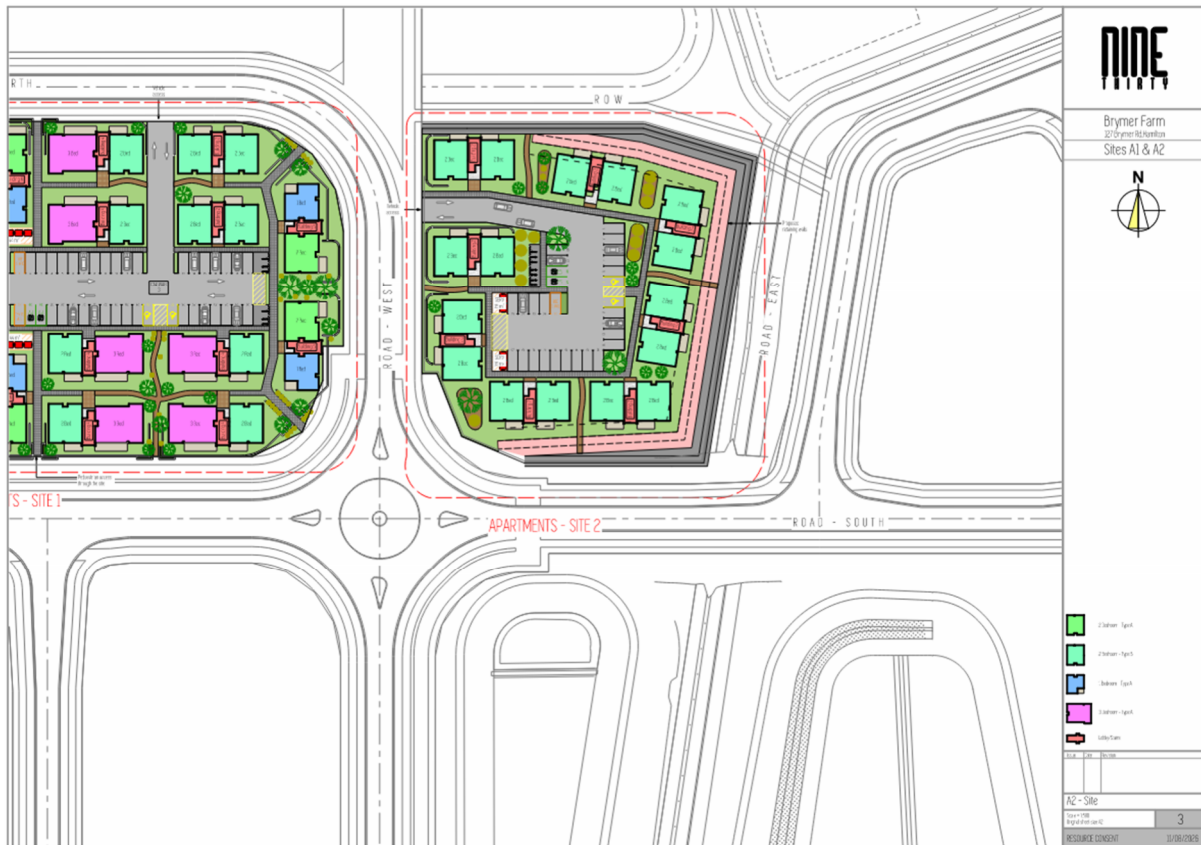


Figure 7: Apartments Site 2 (Nine Thirty)

5. Rooding

5.1. Design Standards

The proposed roads have been designed in accordance with Austroads and Waikato's Regional Infrastructure Technical Specifications (RITS) and the Hamilton City Council (HCC) district plan. Transplan are the lead transport engineers for this project, and they have been providing the technical support with the rooding design.

The design provided is for resource consent purpose only, the rooding design will be further developed at the detailed design stage for engineering plan approval application. Refer to the rooding drawings in Appendix B for further details.

5.1.1. Engineering Exception Decisions

- No engineering exceptions are proposed for this application.

5.2. Integrated Transportation Assessment

An Integrated Transportation Assessment was carried out by Transplan considering the traffic and transportation effects of the proposed residential development. Refer to the transport report for further details.

5.3. Temporary Access

The proposed development will initially gain temporary access via Whatawhata Road (SH23) as the primary construction access point and a central construction haul road for the construction traffic entering and exiting the site. A secondary temporary access points will be provided off Brymer Road, and Harrogate Place and they will all get established as part of the Stage 1 earthworks.

A new temporary access point will be provided via Grandview Road for the Stage 2 earthworks.

A portion of the existing farmhouse metalled access road will be retained. The new central spine haul road will connect to the metalled farm access road, and it will provide an emergency exit onto Whatawhata Road to the south. The emergency exit will be decommissioned once the Whatawhata Road interchange has been established and it is no longer needed. Timing of this will be determined by staging of bulk Earthworks and Civil Construction and the effects are outlined in the Transportation Report for the Construction traffic.

5.4. Road Typology and Design

Collector Roads are contained within 25.8m and 23.3m corridors for the primary and secondary collector roads respectively. The carriageway widths are 9.3m and 6.8m, and the pavement design:

- 40mm DG10 asphaltic concrete
- 450mm granular pavement of 150mm AP40 / 300mm GAP65
- Subgrade improvement layer of 300mm brown rock If required
- Pavement design based on subgrade CBR 4

Local Road PT with a 19m road corridor width and 6.8m carriageway width, and the pavement design:

- 40mm DG10 asphaltic concrete
- 400mm granular pavement of 150mm AP40 / 250mm GAP65
- Subgrade improvement layer of 300mm brown rock If required
- Pavement design based on subgrade CBR 4

Local Road with a 16.8m road corridor width and 6m wide carriageway width, and the pavement design:

- 40mm DG10 asphaltic concrete
- 300mm granular pavement of 100mm AP40 / 200mm GAP65
- Subgrade improvement layer of 300mm brown rock If required
- Pavement design based on subgrade CBR 4

5.5. Parking

Dedicated on-street recessed parallel parking lanes are to be provided within carriageway throughout, and some angled road parking will be provided near the neighbourhood centres and apartment blocks to ensure that the requirements of the HCC District Plan can be complied with.

5.6. Walking

The collector roads will provide 2m wide footpaths on both sides of the road. The local roads and neighbourhood roads will provide 1.8m footpaths on both sides of the road. Open space roads will provide 1.8m footpath on the one side of the road.

A new recreational track will be provided through Te Kootii Park that will connect with the maintenance track in Stage 2 and will provide connections to Fresian Place and Limousine Place. New recreational tracks will be provided through the public reserve areas.

5.7. Cycling

A dedicated 3.5m wide bi-directional cycleways will be provided along the collector roads and raised table crossings will be provided for the road crossings.

A new recreational track will be provided through Te Kootii Park that will connect with the maintenance track in Stage 2 and will provide connections to Fresian Place and Limousine Place. Some

new recreational tracks will be provided through the public reserve areas that will provide for recreational cycling.

5.8. Public Transport

Public transport bus routes will be provided within the development, with the public transport links through Whatawhata Road and Grandview Road.

5.9. Primary Collector Road Bridge

A new two-way bridge on Road 1 will be required for crossing the existing council drain. The new bridge will span across the drain that will connect the southern stages 6 and 7 with northern Stages 8 and 9. The bridge design is at the early conceptual stage, and a few options are being considered. The road bridge design will be further developed during the detailed design stage.

Option one a 18m wide bridge with the 3.5m wide bi-directional cycleway on western side on the bridge and 1.9m wide pedestrian footpaths on both sides of the bridge. Option 2 a 14.5m wide bridge like Option 1 except the bi-directional cycleway would have its own dedicated cycleway bridge crossing.

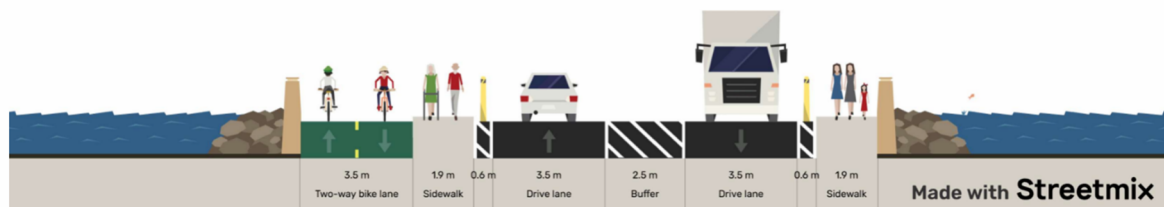


Figure 8: Option one 18m wide road bridge

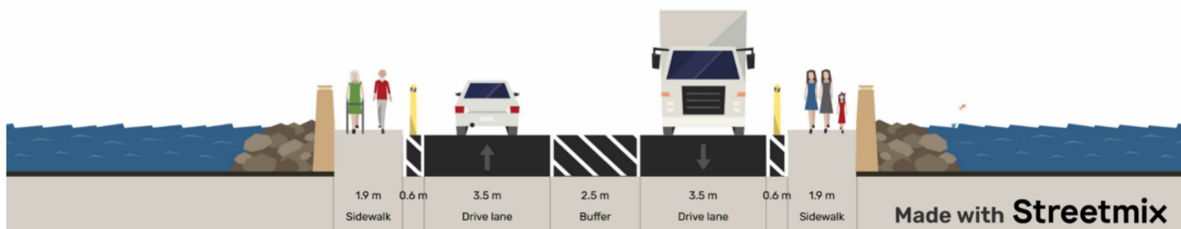


Figure 9: Option two 14.5m wide road bridge

6. Stormwater

A Stormwater Management Plan (SMP) (Appendix A) has been developed to set out the best practice framework for stormwater management within the Project site. The SMP sets out in detail the proposed stormwater reticulation and the proposed mitigation measures for volume and quality control of the stormwater discharges from the site. Refer to the SMP in Appendix A for further details.

The WRC guidelines regional infrastructure technical specification (RITS) and The Land drainage plan has been used to inform and align the SMP with established stormwater management principles.

Below is a summary of what is contained in the SMP.

6.1. Stormwater Management Plan

The SMP has been prepared to support a discharge consent application for the proposed development. The overall Project area is divided into two developments as listed below.

The proposed stormwater management system has been designed to provide the following:

- Soakage and treatment for up to the WQV storm event through a combination of on-lot soakage devices.
- Stormwater conveyance for up to 10year cc ARI rainfall event via piped Network to designated Artificial Wetlands. Discharge limited to 80% pre-development levels (Maximum).
- Conveyance of flows up to the 100yr ARI storm events as overland flows within the road corridors that will be directed to the designated Artificial Wetlands, for each of the stormwater catchments. Limit post-development peak discharges to no more than 80% of pre- development flows, where applicable.
- Preserve existing flow paths and discharge locations to avoid introducing new hydrological impacts.
- Account for external inflows and upstream catchments to ensure downstream impacts are not worsened under post-development conditions.
- Support future maintenance, accessibility, and ecological enhancement through features such as maintenance tracks and riparian planting zones.

A flood model has been developed using the region's observed rainfall data. The model has been used to test a sensitivity scenario in which all primary stormwater devices are blocked. Even under this worst-case condition the model demonstrates that the development maintains flood immunity with only minor exceedances and expected to be mitigated through detailed design refinements. Refer to section 4.2 of the SMP for more details relating to flooding for the development.

Several design aspects of the proposed stormwater will require further refinement during detailed design stage to ensure compliance and for further value engineering.

6.1.1. Stormwater System

- *Stormwater management across Brymer Farms will include several devices. These include the following:*
- Modified drains/channels with landscaping.
- Artificial Wetlands
- High flow Bypass
- Forebay
- On-lot stormwater Retention through Soakage
- Protection of existing bush and covenant features.

- Planting of riparian areas if applicable.

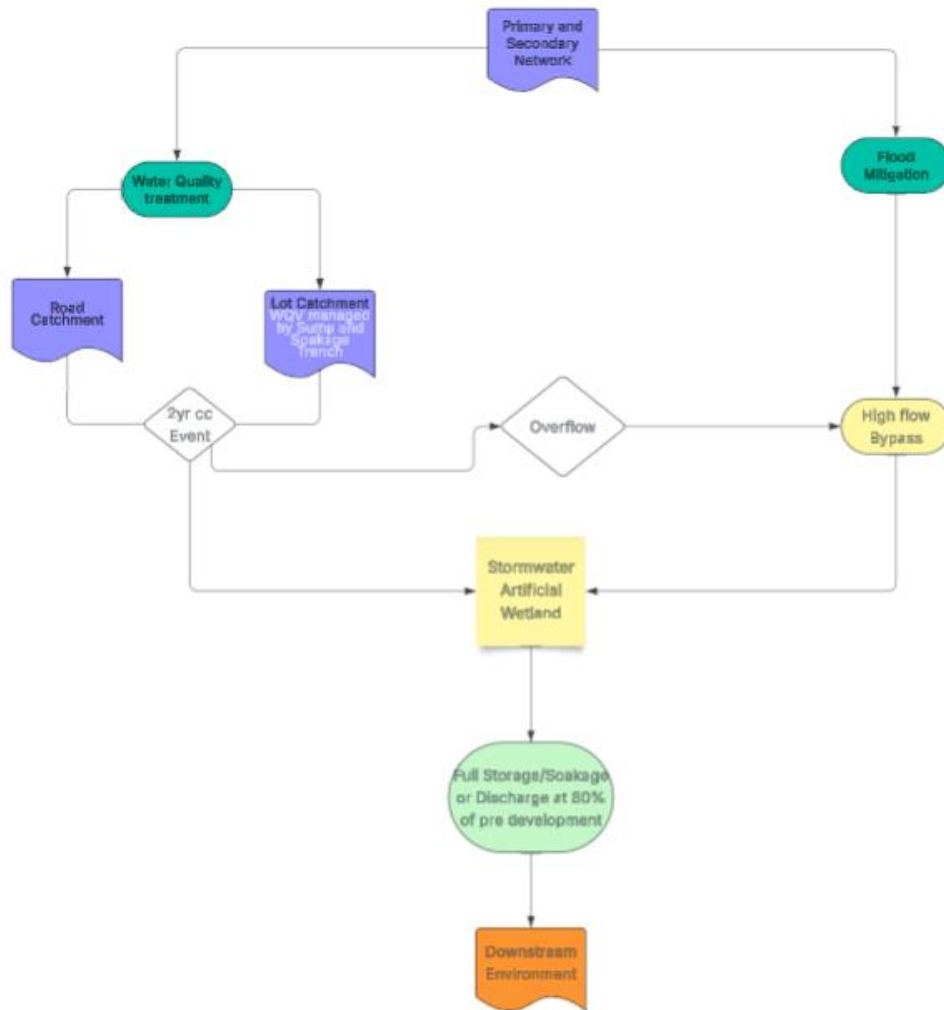


Figure 10: Hydraulics Connectivity Chart

6.1.2. Stormwater Reticulation

Existing stormwater infrastructure within the site is largely limited to farm/roadside drains and streams. A number of these drains form part of the Waikato Regional Council's Land Drainage Management Plan for Waikato Central – Ohote Basin and receive stormwater from surrounding development.

The Projects development area will be supported by new public piped stormwater networks and protection and enhancement of the existing drainage corridor in accordance with statutory requirements where applicable.

6.1.3. Capacity and Quality

Stormwater strategies are as follows:

Strategy for lot areas

Stage 1-12

Roof runoff is managed using inert roofing materials, while driveway runoff is directed through a catch pit with a sump for pre-treatment before disposal into a roadside soakage trench via soakage or on-site stormwater tank. Overflow is located in the catchpit system for flows surpassing the WQV event within the lot areas. Excess flows will be diverted into the designated stormwater Wetland via the piped network.

Stage 1A

For the northern Stage 1A, stormwater will be managed with on lot treatment and attenuation utilising soakage devices, rainwater collection tanks etc.

Strategy for road carriageway

Stage 1-12

Artificial wetlands form a critical part of the overall stormwater mitigation system. Wetlands designed to treat the water quality volume, provide extended detention (1.2xWQV) for their corresponding catchments, as well as manage peak flows up to a 100-year return period storm event (including climate change) for each individual catchment. These wetlands are designed to temporarily store runoff during storm events and release it at a controlled rate, thereby reducing downstream flooding risk and protecting receiving environments. Wetlands discharge to modified drains and culverts, which heads to Ohote stream via an existing channel eventually to Waipa River.

Key wetland design considerations include:

- Sizing based on achieving water quality volume within the permanent storage zone, the extended detention and attenuation of the 10 and 100-year storm events releasing at 80% of pre-development.
 - Extended detention in 1.2xWQV provide within proposed wetlands.
 - Flow splitter device upstream of each wetland to direct <2-year event through the wetland, >2-year event is directed to a high flow bypass channel to prevent scour of treatment elements and re-mobilisation of accumulated sediments.
 - High flow bypass channel outlet includes an outlet control. Flows back up and engage flood storage within the wetland.
 - Permanent storage pool bathymetry per RITS to be detailed during EPA.
 - Maintenance access ramp and platform adjacent the forebay will be detailed during EPA.
- Freeboard and spillway design to safely pass extreme events.**

Stage 1A

An artificial wetland and AquaFort treatment device are proposed to provide stormwater mitigation for the site. Flows from the artificial wetland discharge to the adjacent existing wetland. The artificial wetland has been designed to discharge at rates comparable to the existing wetland regime, thereby promoting groundwater recharge and maintaining the baseflow and hydrological characteristics of the receiving wetland.

6.1.4. Lot Connections

- *All lots are serviced with lot connections as per RITS guidelines and specifications.*

6.1.5. Culvert Construction Methodology

Culvert construction within existing watercourses at Brymer Farms will be undertaken using a temporary dam-and-divert methodology, with the duration of in-stream works limited to no more than three months at any single crossing. The approach is summarised below and will be refined through site-specific method statements prepared by the contractor and approved by Waikato Regional Council prior to works commencing.

Construction sequence:

1. Pre-works fish salvage — immediately prior to diversion, a qualified ecologist will undertake fish salvage within the isolated works reach in accordance with the New Zealand Fish Passage Guidelines (NIWA / DOC / MfE). All captured fish will be relocated to a suitable upstream or downstream reach outside the works zone.
2. Temporary diversion — clean upstream flows will be diverted around the works area via a temporary bypass channel or pumped overland to a stabilised discharge point downstream, maintaining baseflow continuity in the receiving watercourse. The diversion system will be sized to convey at least the 5-year ARI event during the construction period, with freeboard to contain higher flows where practicable.
3. Isolation and dewatering — the works area will be isolated using sandbags, silt bags, or sheet-pile coffer dams (depending on ground conditions and flow depth), then progressively dewatered. Dewatering discharge will be directed to a sediment retention pond or decanting earth bund for treatment prior to controlled release, with flocculant dosing if required to achieve the clarity standard.
4. Culvert installation — the culvert will be constructed in the dry, with the invert embedded a minimum of 25% of the culvert height below the natural streambed level to maintain bed material continuity and support fish passage through the completed structure. A low-flow channel will be formed within the culvert barrel to concentrate baseflows and provide a defined passage route for aquatic organisms.
5. Reinstatement and stabilisation — following culvert installation, the streambed will be reinstated with natural bed material, banks stabilised with riprap and/or revegetation, and the temporary diversion decommissioned. The works area will be fully stabilised prior to removal of sediment controls.

Fish passage — construction phase: The pre-works fish salvage and the maintenance of downstream baseflows via the temporary diversion are the primary measures to protect fish populations during construction. The diversion system will be checked daily for fish stranding, particularly at the intake and outfall. Works will be programmed to avoid the peak fish migration period (generally September–November for galaxiid species) where practicable, with timing confirmed in consultation with WRC and the project ecologist.

Fish passage — permanent operation: All culverts have been designed as embedded structures with the invert set below the natural streambed, retaining bed material through the barrel. This approach is consistent with the New Zealand Fish Passage Guidelines and provides for the passage of native species identified within the site. Culvert grades have been kept to 0.5% to limit in-barrel velocities, and low-flow channels within each barrel will maintain passage during baseflow conditions. Riprap inlet and outlet aprons have been sized to manage scour without creating perched outfalls that would act as barriers to upstream migration.

6.1.6. Groundwater Recharge

Low lying plains of the Development Area is formed of a peat bog that has been drained overtime and converted to agriculture and horticultural use. Careful consideration of stormwater management is required on peat soils.

Soakage and recharge of stormwater into peat maybe required to maintain hydrology to prevent dewatering and to mitigate shrinkage. Recharge pits/Soakage designed at each individual lot and Wetlands are designated within each catchment for the development to encourage even distribution of groundwater recharge.

Detailed investigations for each area will be required by a suitable qualified geotechnical engineer to determine the correct requirements for recharge and to provide development controls for infrastructure and buildings throughout the various catchment areas.

6.2. Flooding

A 2D flood model has been developed for the site using HEC-RAS. The model has been used to assess existing, design and sensitivity scenarios.

The figure below shows the contributing catchment of the site during the 100-year event, delineated through QGIS/HEC HMS based on a 10m grid externally. Data used is comprised of localised site survey and LINZ data capturing the wider extent of the catchment. The catchment extent is generally consistent with the ICMP catchment framework; however project specific catchment delineation has been undertaken as part of this assessment to refine upstream contributing areas based on current information for data and modelling.

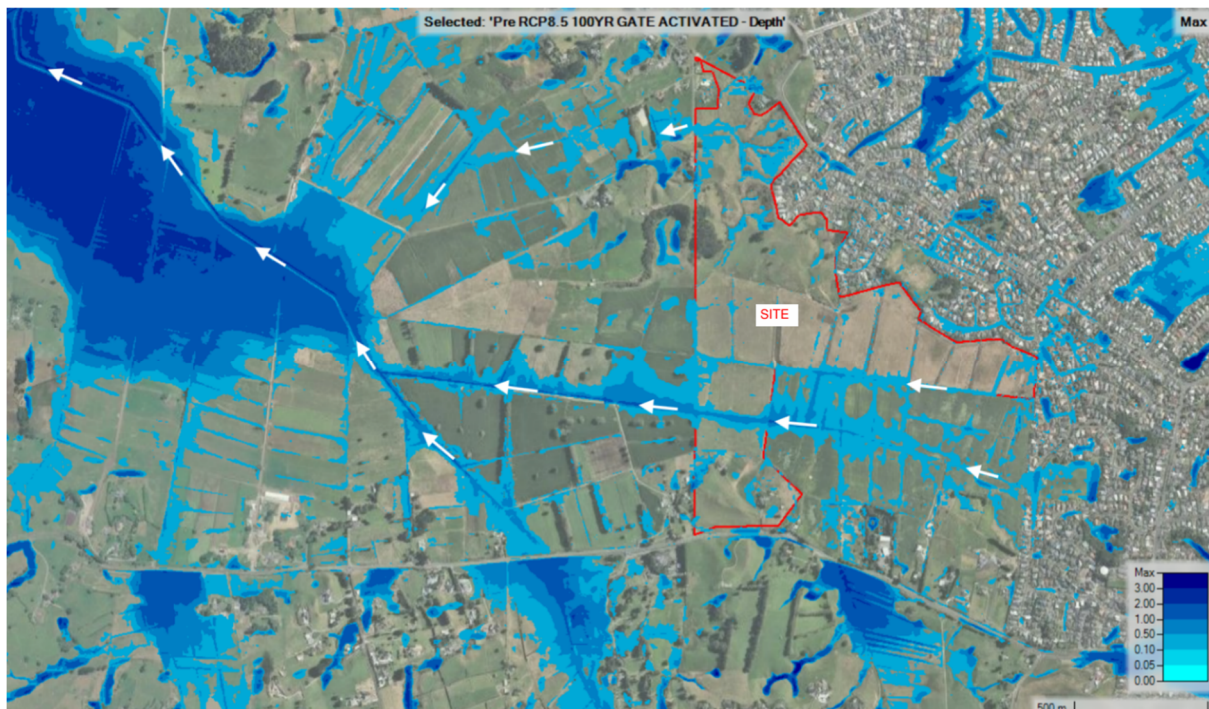


Figure 11: Existing Flood Extent in the 1% AEP Event

The flood model demonstrates that there is existing downstream flooding that affects downstream properties. This is mainly due to constriction at Laxon road culvert, stop banks and existing low-lying topography that is allowing to accumulate water to a level before it overflows causing flooding within Ohote stream catchment. Stormwater devices have been carefully designed to mitigate the effects of flooding. The proposed strategy highlighted will mitigate impact downstream, and the development

maintains flood immunity, with only minor exceedances expected to be mitigated through detailed design refinements.

7. Wastewater

7.1. Design Standards

Wastewater systems have been designed in accordance with Regional Infrastructure Technical Specifications (RITS) V2.

7.1.1. Engineering Exception Decisions

- No engineering exceptions are proposed for this application.

7.2. Strategic Wastewater Connection

The water and wastewater strategic workshop was held with Hamilton City council (HCC) and IAWAI on the 11/02/26. The purpose of the workshop was to discuss possible public wastewater connection points to the HCC wastewater network for future servicing the Project.

Maven prepared three possible options for consideration for the workshop.

- Option one: Wastewater rising main from wastewater pump station A heading east with a connection to the existing gravity manhole WWR11005 on Ayrshire Drive. The public gravity main would then drain to the existing wastewater pumpstation SPS098 on Grandview Road.
- Option two: Wastewater rising main from the wastewater pump station A, would head north along Brymer Road to Rotokauri Road to connect into a new gravity manhole near the intersection of Brymer Road and Rotokauri Road. The new 300mm uPVC SN16 gravity network would then continue east along Rotokauri Road to Taiatea Drive. It would then head north to Wetini Drive before terminating at the existing western interceptor manhole WWN11002 on Wetini Drive.
- Option three: Wastewater rising main from the wastewater pump station A heading south through the development site to Whatawhata Road. The rising main would then head east along Whatawhata Road to the Rifle Range intersection, before terminating at the existing western interceptor manhole WWS15074 located within the intersection roundabout.

The feedback received from HCC and IAWAI for the three options:

- Option one: HCC advised that the existing SPS098 wastewater pumpstation is already operating close to capacity and is unlikely to be able to service the proposed development.
- Option two: There is currently no strategic wastewater infrastructure or planning outside the HCC boundary. This option would require a pumping head of up to 40m, resulting in higher operational costs and potential pressure management issues. As an alternative, HCC suggested routing the connection along Grandview Road to connect with the Western Interceptor at the intersection of Grandview Road and Avalon Drive.
- Option three: The downstream wastewater network currently has limited capacity due to existing network constraints. If these constraints were addressed through network upgrades, and wastewater modelling confirmed that sufficient downstream capacity is available, this would become a viable connection option.

The fourth option suggested in the workshop with the Grandview Road and Avalon Drive connection, and this was confirmed as the new preferred route option. Wastewater pump station B would instead become the new primary wastewater pump station. With comparison with the option 2 it would provide a shorter route, and it would only require approximately half the required pumping head, and it would be easier to construct based on the alignment.

Under the fourth option, the rising main would follow Road 20 heading south down towards Road 8 and then head east following Road 8 through to Grandview Road. The rising main would then follow Grandview Road heading northeast before terminating at a new receiving manhole on Grandview Road, outside the 91A Grandview Road property. A new gravity wastewater network would then be constructed from the new manhole through to the western interceptor manhole WWP15002, that is located at the intersection of Grandview Road and Avalon Drive.

The preferred connection option route is shown in Figure 5 below. Refer to Appendix B for the wastewater drawings for further details.

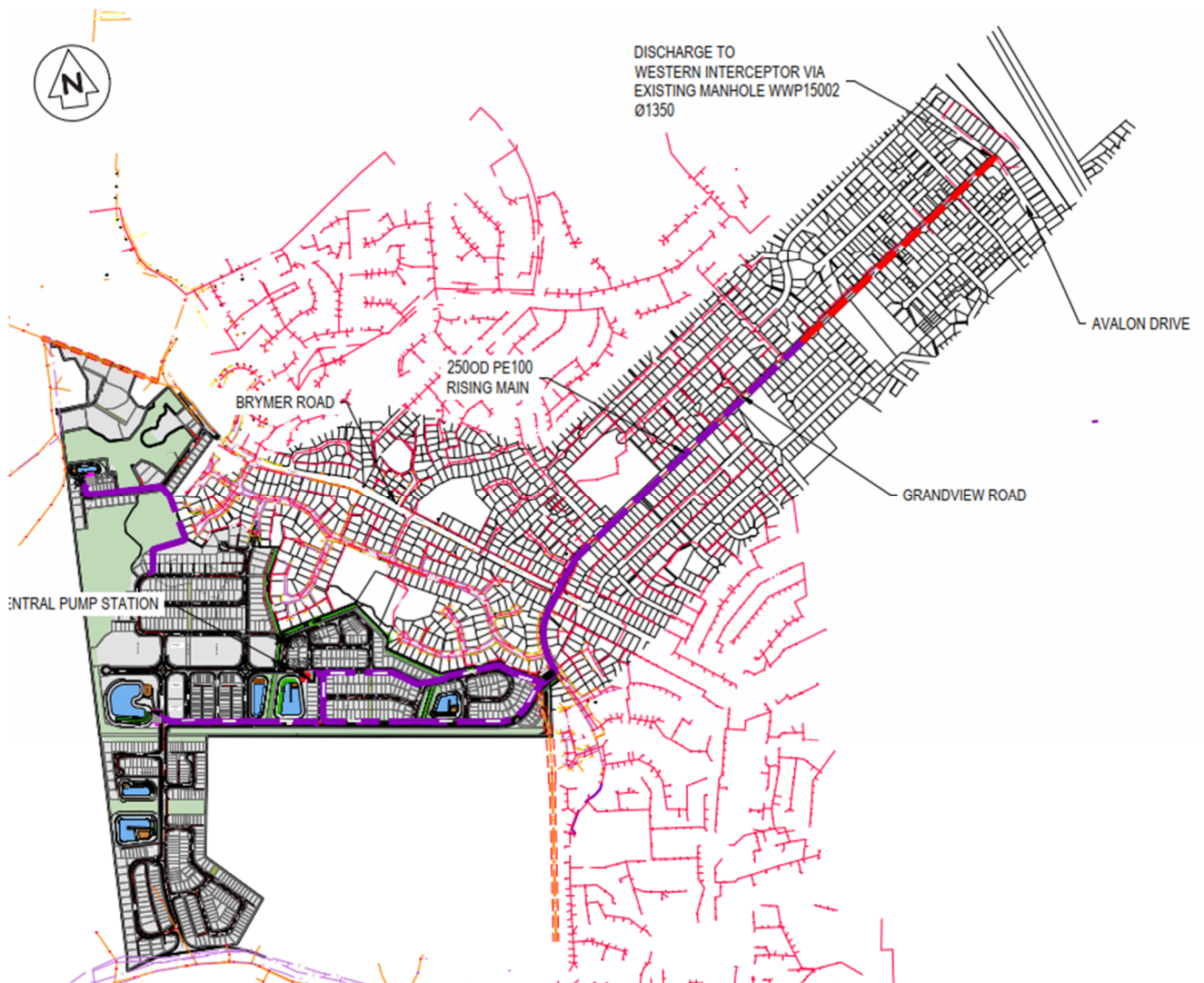


Figure 12: Proposed Public Connection Route

7.3. Catchment Areas

The proposed development consists of 1048 units across approx. 81ha. Out of the whole development area, total catchment for wastewater network is 53.94ha, excluding reserve areas and the large lot residential lots within Stage 1A. Catchment A with 27.6ha (Stages 6-11), Catchment B with 22.84ha (Stages 1 - 5) and Catchment D with 3.5ha (Stage 12). The wastewater design has been based on 3 people per unit as per the HCC's feedback.

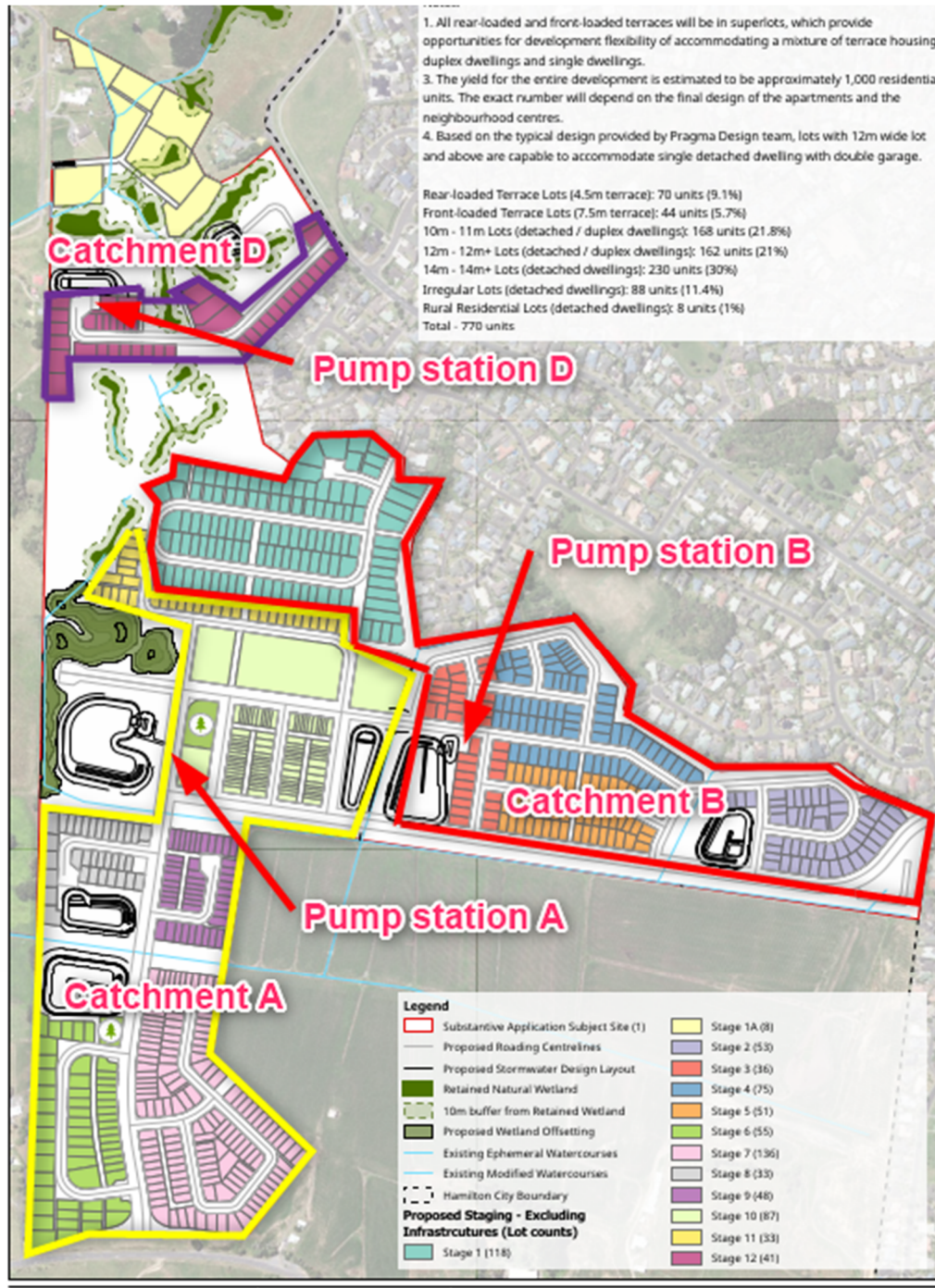


Figure 13: Wastewater Catchment Areas

7.4. Design Flows

The wastewater pumpstation demand design flow calculation results are summarised in the Table 5 below. Refer to Appendix C for the wastewater demand calculations.

Catchments	Area (Ha)	Stages	ADF(m ³ /day)	PWWF(l/s)
A	27.60	6-10	299.38	23.22
B (Stage 1 only)	8.40	1	66.08	5.12
B	22.84	1-5	199.80	15.49
D	3.50	12	24.60	1.91
Overall	53.94	1-12	576.02	44.67

Table 5: Wastewater demand design flows

7.5. Wastewater Modelling

WSP were engaged by HCC/IAWAI to undertake a wastewater modelling assessment for the Brymer Farms and the Wallace Road developments. The Brymer Farms – Wastewater Modelling Results report (WWMRR) was prepared by WSP on 2nd July 2026, to support the fast-track substantive application. Refer to Appendix I for the WSP WWMRR for further details.

The purpose of the assessment was to identify the potential impact of the PWWF from the proposed developments on the existing HCC wastewater network. Three potential future development areas were also identified and included with the wastewater modelling assessment as shown in Figure 8 below from the WSP WWMRR.

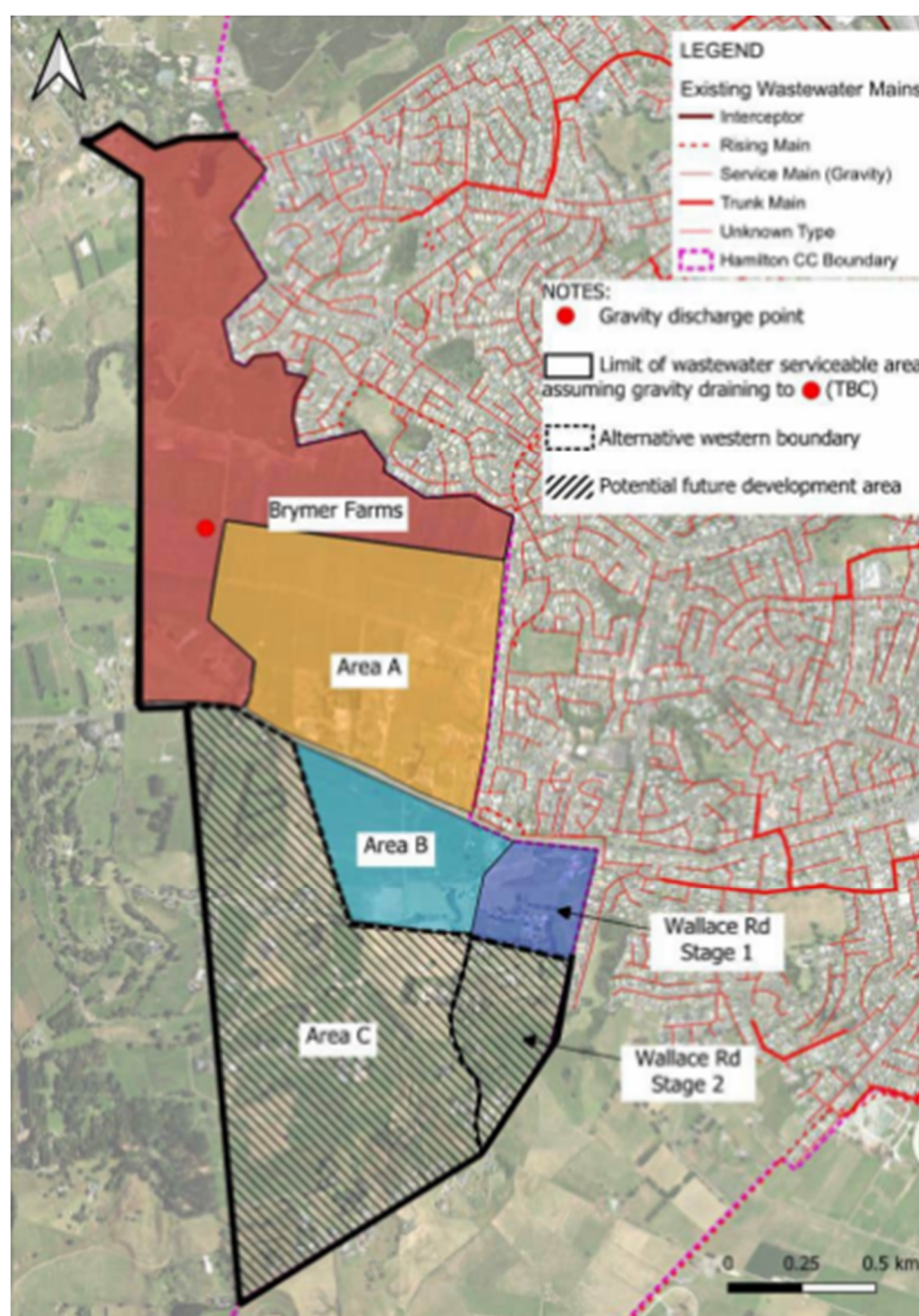


Figure 14: Wastewater Modelling Catchment Areas (WSP)

The fourth connection option was selected as the preferred option to the HCC wastewater public network connection, and it was selected for the wastewater modelling assessment. The new public connection will be to connect to the existing western interceptor manhole WWP15002, which is located within the Grandview Road and Avalon Drive intersection.

The wastewater demand flow calculations used for the assessment was based on the RITS V1 design calculations. The WSP wastewater summary of the development components Table 6 shown below.

Description	Area (ha)	Population Equivalent	Peak Wet Weather Flow (PWWF) (L/s)
Brymer Farms	62	4,160	38.59
Area A	66	2,970	32.89
Area B	35	1,575	18.17
Area C	139	6,255	67.81
WA (Wallace Road) Stage 1	~12.5	2,700	7.61
WA (Wallace Road) Stage 2	~15		15.23

Note: The peak wet weather flows (PWWF) for each development were provided by the respective developers and calculated in accordance with the Regional Infrastructure Technical Specification (RITS), Version 1.

Table 6: Summary of the development components (WSP)

The wastewater modelling assessment focused on three demand scenarios that are listed in the WSP demand scenario Table 7 shown below.

Demand Scenario	Description	Total Area	PWWF (L/s)
1	Only considers the PWWF from Brymer Farms	62	38.59
2	Resulting PWWF demands from Brymer Farms, Area A, Area B and WA Stage 1	175.5	97.26
3	Demand from Scenario 2 + Resulting PWWF demands from Area C and WA Stage 2	329.5	180.3

Table 7: Demand scenarios (WSP)

For each wastewater demand scenario, they were assessed under four different modelling scenarios that are listed in the WSP modelling scenarios Table 8 shown below.

No.	Model Scenario	Description
1	Baseline	The 'baseline models' are referred to as the models containing 2041 and 2061 wastewater demands, excluding the demand for Brymer Farms and Wallace Road development (or any land development outside of the current HCC boundary).
2	Baseline + Funded Strategic Upgrades	The Council funded strategic upgrades that are confirmed to be implemented by each planning horizon (2041 and 2061), are added to the baseline models developed in Scenario 1.
3	Baseline + Fast Track Developments	The demand for proposed for the Fast Track development components are added to the baseline (2041 and 2061) models developed in Scenario 1 (with no strategic upgrades).
4	Baseline + Funded Strategic Upgrades + Fast Track Developments	The demand for proposed for the Fast Track development components are added to the (2041 and 2061) models developed in Scenario 2.

Note 1: The Council funded strategic upgrades included in the modelling assessment are Upper Western network (Kahikatea Greenwood, storage and pre-treatment at Lorne St, 5th Ave diversion), Hillcrest bulk storage, Eastern interceptor mid-section storage, Eastern interceptor upper section storage, Te Anau Splitt diversion, Western interceptor mid-section storage, Enderley trunk main upgrade, Collins Rd storage.

Note 2: Demand Scenario 3 was only undertaken in the 2061 planning horizon.

Table 8: Modelling scenarios (WSP)

The wastewater modelling wastewater demand scenario results are summarised in the WSP Table 9 shown below.

Demand Scenario	Pipe Filling Ratio	Manhole Spilling	Velocity
1	- Pipe utilisation increases across the Western and Rotokauri Interceptor sections with the addition of Brymer Farms demands for both the 2041 and 2061 scenarios. - Several pipe sections that operate below full capacity under pre-development	No manhole overflows were identified within the assessment extent.	No significant changes in pipe velocities were observed within the assessment extent before and after adding the demands of demand scenario 1.

Demand Scenario	Pipe Filling Ratio	Manhole Spilling	Velocity
	conditions are predicted to surcharge once development demands are included in the 2041 scenario, with pipe utilisation increasing from below 100% to approximately 101–107 %. The number of pipe sections exceeding 100% utilisation further increases in 2061, with some sections exceeding 117%.		
2	- Pipe utilisation increases across the assessed Western and Rotokauri Interceptor sections following the addition of the Brymer Farms and Wallace Road development demands for both the 2041 and 2061 planning horizons. - Several pipe sections that are below capacity under pre-development conditions are predicted to surcharge in 2041, with utilisation increasing to approximately 114–130% once development demands are included. - The number of pipe sections exceeding 100% utilisation further increases in 2061, with some sections exceeding 150%.	No manhole overflows were identified within the assessment extent.	Pipe velocities increase slightly across the assessment extent with the addition of Brymer Farms and Wallace Road development demands in both 2041 and 2061, with a maximum increase of approximately 7%.
3	- Pipe utilisation increases across the assessed Western and Rotokauri Interceptor sections following the addition of the Brymer Farms and Wallace Road development demands along with the future potential developments in 2061. - The pipe utilisation increases between a broad range (approximately 102–180%) once development demands are included.	No manhole overflows were identified within the assessment extent.	Pipe velocities increase slightly across the assessment extent with development demands in both 2041 and 2061, with a maximum increase of approximately 9%.

In addition to the above, the broader network was reviewed to confirm that no local overflows occur under any scenario due to the additional flows introduced into the Western and Rotokauri Interceptors.

Table 9: Wastewater Modelling scenario results (WSP)

Refer to Appendix I for the WSP wastewater modelling Report. The wastewater modelling maps are located within Appendix A of the WSP wastewater modelling report. These maps demonstrate how the wastewater network is performing under the different demand scenarios, which are specifically

looking at the pipe capacities, manhole spill volumes of any surcharging manholes and the pipe velocities. The wastewater modelling results showed there were no local manhole overflows under any of demand scenarios from introducing additional flows into the Western and Rotokauri Interceptors.

The wastewater base 2061 projection maps show the pipe network directly upstream of the existing Grandview wastewater pump station almost at full pipe capacity, without adding the additional wastewater flows from the proposed and future developments.

7.6. Reticulation

7.6.1.1. Existing Reticulation

There is no existing wastewater reticulation network within the site. There is an existing small wastewater pumpstation located within Te Kootii Park, SPS105. This existing wastewater pumpstation has only been sized to cater for the local catchment, and it discharges to the existing gravity network Ayrshire Drive. The existing public reticulation then feeds into another existing wastewater pumpstation SPS098 on Grandview Road. We were advised that this wastewater pumpstation is near full capacity.

7.6.2. Proposed Reticulation

The internal reticulation for the proposed development, will be provided with new 150mm and 225mm dia. uPVC SN16 wastewater lines. These wastewater lines will discharge to the new wastewater pump stations, that will service the different wastewater catchment areas within the development. The proposed wastewater reticulation networks will be progressively developed with the civil stages.

Low pressure sewer network will be required to service some of the lower lots within Stage 12, that cannot drain by gravity back to the proposed gravity pipe network that connects to WWPS D. The low-pressure sewer network will pump the wastewater from these lots up to the receiving wastewater gravity manhole WWMH 4A-11 on Road 50 and then the wastewater will be conveyed by the gravity pipe network to WWPS D. The Stage 1A large lot residential lots, will require individual onsite wastewater treatment to service these lots.

7.7. Staged Wastewater Servicing

A meeting was held between IAWAI/HCC and the client on 23rd July, to formalise an agreement for servicing the development for water and wastewater. IAWAI/HCC advised that for Stage 1 for the first 118 lots could be serviced for wastewater through an interim solution. From Stage 2 onwards the ultimate solution would need to be constructed with a connection to the western interceptor at the intersection of Grandview Road and Avalon Drive.

For the interim solution for Stage 1, it will involve establishing the new central WWPS B within the Stage 3 reserve Lot. An interim wastewater rising main would then be constructed from WWPS B, and it would follow Road 28 heading east and then it will continue east following the stormwater drain maintenance track through to Road 8. It would then continue along Road 8 out to Grandview Road, before terminating at the existing wastewater gravity receiving manhole WWR12089 for the Grandview Road WWPS.

For Stage 2 a new wastewater rising main will be constructed from the central WWPS B and it will follow Road 20 to the south and then it will continue west following Road 8 out to Grandview Road. The rising main would then follow Grandview Road heading northeast, before terminating at a new receiving wastewater manhole in Grandview Road, outside the 91A Grandview Road property. A new

gravity wastewater trunk main would then be constructed from the new wastewater manhole through to the western interceptor manhole WWP15002, which is located at the intersection of Grandview Road and Avalon Drive. The interim rising main used for Stage 1 would then be abandoned and all of the wastewater entering WWPS, would be pumped through the new wastewater rising main.

Refer to Appendix J for the wastewater serving plans for further details.

7.7.1. Lot Connections

All lots are serviced with lot connections as per RITS guidelines and specifications.

7.8. Connection Points and Staging

- Stage 1A – Will be serviced by decentralised onsite wastewater treatment.
- Stage 1 –The wastewater will be conveyed with a new gravity reticulation network to the central wastewater pump station B (WWPS B) by connecting to the receiving manhole WWMH 2C-1 within Stage 3.
- Stage 2 –The wastewater from Stage 2 will be conveyed with a new gravity reticulation network to the receiving manhole WWMH 2C-1 within Stage 3.
- Stage 3 - The Stage 3 wastewater would be conveyed through the Stage 2 wastewater reticulation network to WWPS B. The wastewater network will connect into Stage 2 wastewater manholes WWMH 2A-2, WWMH 2H-0 and WWMH 2H-2. Wastewater line 2D-2 to 2D-3 would be constructed minimum 1m within Stage 4 and then end capped. Wastewater line 2D-1 to 2E-1 will be constructed minimum 1m within Stage 4 and then end capped. The wastewater 2I line would be fully constructed.
- Stage 4 - The Stage 4 wastewater would be conveyed through the Stage 2 wastewater reticulation network to WWPS B. The wastewater lines 2D-2 to 2D-3 and 2D-1 to 2E-1 that were end capped during Stage 3 will now be fully constructed. The wastewater network will connect into WWMH 2G-1. Wastewater line 1A-3 to 1A-4 will be constructed minimum 1m within Stage 6 and then end capped.
- Stage 5 - The wastewater pipe network was established during Stages 2 and 3, lot connections are to be constructed into the Stage 5 lots.
- Stage 6 - WWPS A will be constructed within Stage 1 area and then the Stage 6 wastewater gravity network will be constructed to connect to the new WWPS A. WWPS A will then pump the wastewater to the upstream receiving wastewater manhole within the Stage 3, and then the wastewater will then gravity to WWPS B. Wastewater line 3I-3 to 3J-1 will be constructed minimum 1m within Stage 7 and then end capped. Wastewater line 3A-4 to 3A-5 will be constructed minimum 1m within Stage 9 and then end capped. Wastewater line 3A-3 to 3F-1 will be constructed minimum 1m within Stage 8 and then end capped. Wastewater line 1A-2 to 1B-1 will be constructed minimum 1m within Stage 10 and then end capped. Wastewater line 1A-3 to 1A-4 will be constructed minimum 1m within Stage 10 and then end capped.
- Stage 7 - The Stage 7 wastewater would be conveyed through the Stage 6 wastewater reticulation network to WWPS A. The wastewater line 3I-3 to 3J-1 that was end capped during Stage 6, will now be fully constructed and the upstream network.
- Stage 8 - The Stage 8 wastewater would be conveyed through the Stage 6 wastewater reticulation network to WWPS A. The wastewater line 3A-3 to 3F-1 that was end capped during Stage 6, will now be fully constructed and the upstream network.

- Stage 9 - The Stage 9 wastewater would be conveyed through the Stage 6 wastewater reticulation network to WWPS A. The wastewater line 3A-4 to 3A-5 that was end capped during Stage 6, will now be fully constructed and the upstream network within Stage 9.
- Stage 10 - The Stage 10 wastewater would be conveyed through the Stage 6 wastewater reticulation network to WWPS A. The wastewater lines 1A-2 to 1B-1 and 1A-3 to 1A-4 that were end capped during Stage 6, will now be fully constructed and the upstream network within Stage 10. Wastewater line 1B-2 to 1B-3 will be constructed minimum 1m within Stage 11 and then end capped.
- Stage 11 - The Stage 11 wastewater would be conveyed through the Stage 10 wastewater reticulation network to WWPS A. The wastewater line 1B-2 to 1B-3 that was end capped during Stage 10, will now be fully constructed and the upstream network within Stage 11.
- Stage 12 - The wastewater will be conveyed with new gravity reticulation network to the new wastewater pump station D (WWPS D), which will be located within the wastewater reserve Lot 5003 within Stage 12. The proposed Stage 12 residential lots that cannot connect to the gravity network within Road 50, will be serviced with low pressure sewer network (LPS). A new wastewater rising main will be constructed from WWPS D and it will head east up Road 50 and then it will follow the eastern boundary between Stages 1 and 12 to the south and then it will continue down to Road 14 before terminating at the Stage 1 upstream gravity manhole WWMH 1B-7. The wastewater from Stage 12 will then be conveyed through the Stage 1 reticulation network to the new central wastewater pump station A.

7.9. Wastewater Pump Station

7.9.1. RITS Wastewater Pump Station Requirements

This section of the report relates to the proposed wastewater pump stations within Stages 1, 3 and 12. The specification and design of the new wastewater pump station has been developed in partnership with Aquate.

The proposed pump station will comprise of a collection manhole, inlet pipes, a wet well, control cabinet, odour biofilter and emergency storage tanks. A wastewater design check list has been provided based on the RITS minimum requirements and compliance information has provided against each item and this is presented in Table 10 below.

Requirements	Compliance
a) Area around the pump station shall be graded to prevent surface water flowing onto or over the pump station cover slabs.	The pump station areas have been elevated above the nearby roads, and they will grade back to the road areas.
b) Free of secondary flow paths for 1% AEP flood level, and the pump station lid levels shall be provided with a minimum freeboard of 300mm above the estimated flood level.	The pump station lids will be constructed outside of the secondary overland flows for the 1% AEP flood level, and the pump station lids will have minimum 300mm freeboard above the 1% AEP flood levels.
c) Pumping systems shall • Have a pumping capacity of N+1 with a minimum of two identical pedestal mounted submersible sewage pumps. • Each pump shall be capable of discharging the design peak wet weather flow rate from the catchment. • Include sufficient well volume to operate	The pump stations are compliant with these conditions refer to the Aquate Pump Station technical specifications for further details.

under normal conditions without surcharge to the incoming wastewater network.	
d) The station shall be located to ensure that the entire design catchment can be serviced.	The Central WWPS B will convey all the wastewater from all stages. WWPS A, will convey all the wastewater for Stages 6-11. WWPS D will convey all the wastewater for Stage 12 residential lots.
e) All stations shall be contained within a separate local purpose reserve - drainage title set out to provide safe and easy operation and maintenance of the site without impacting on public activities surrounding the site and is designated in accordance with the relevant district plan or vested as part of a subdivision.	All wastewater pump stations will be contained within separate local purpose wastewater reserve titles, and they will be vested with HCC. The wastewater pump stations have been set out to provide safe and easy operation and maintenance, without impeding any public activities surrounding each site.
f) The station shall be designed to service the entire catchment area of land beyond the reach of the existing gravity system. Refer to Clause 5.1.6.	The wastewater pump stations have been designed to account for the whole wastewater catchment area that is beyond the reach of the existing gravity system.
g) In staged construction, guidance from the Council is required to ensure the correct sizing of the pump station and associated rising mains and storage facilities meet the short and long-term requirements of the catchment.	The pump stations have been designed to cater for the short term and long-term requirements. There is allocated space to expand the underground wastewater storage if required to do so in the future. Hamilton City Council to review and provide feedback.
h) A minimum emergency storage capacity of nine hours average dry weather flow, measured between the high-level alarm and the point of overflow.	The pump station has been designed to account for a minimum emergency storage capacity of 9 hours.
i) It is recommended that prior to submission of the detailed design, consultation is undertaken with Council to ensure that the design is fit for purpose.	Hamilton City Council to review and provide any comments on Maven Waikato Limited's wastewater pump station proposal, prior to EPA submission.

Table 10: WWPS RITS Requirements

Please refer to the wastewater drawings in Appendix B, and Wastewater Pump Station Technical Specifications in Appendix E for further details.

7.9.2. Emergency Storage

The proposed pump station will be provided with emergency storage tanks to store wastewater in the event of pump failure. A minimum 9-hour emergency storage based on average daily flow will be provided prior to emergency overflow occurring in accordance with RITS.

The central WWPS B will provide the emergency storage for wastewater catchment B only, the emergency storage for the other catchments will be provided at each individual wastewater pump station. Each of the wastewater pump stations would be fitted with integrated wastewater telemetry and control systems. The wastewater pump stations will use this to communicate with the other wastewater pump stations and will dynamically adjust their pumping to avoid overloading the network. Additional 25m³ of buffer storage will be provided at the Grandview WWPS for the interim Stage 1 connection.

The wastewater pump station emergency storage requirements for each wastewater pump station are summarised in Table 11 below.

Wastewater Pump Station	Emergency Storage Volume Required (m ³)
WWPS A	112.27
WWPS B (Stage 1 only)	24.78
WWPS B	69.43
WWPS D	16.38

Table 11: Wastewater Pump Station Emergency Storage

7.9.3. External Services

The successful operation of the wastewater pump station is reliant on the provision of adequate external services including:

- Wash Water
- Power
- Stormwater / Overland Flow
- Telemetry wireless pathways

Wash Water

The proposed pump stations will be provided with a 63OD MDPE ridermain from the proposed watermain for the water supply feed. They will provide the water supply required for wash down purpose for the pump station.

Power

A reticulated power network will be designed and installed in the proposed adjacent roads to provide a point of connection for power for the proposed pump stations.

Stormwater / Overland Flow

The proposed pump stations will be elevated from the ground and situated away from the overland flow paths and flood plain.

Electrical and Telemetry

The electrical and telemetry requirements for the proposed pump station will be confirmed with HCC. The alarm and operational data control system will be installed by the developer, or by HCC at the developer's cost.

8. Water

8.1. Design Standards

The Regional Infrastructure Technical Specifications (RITS) sets out design and construction standards for water reticulation, potable water supply and firefighting supply in accordance with SNZPAS 4509:2008 (NZ Fire Service Fire Fighting Water Supply Code of Practice).

8.1.1. Engineering Exception Decisions

- There are no engineering exception decisions.

8.2. Existing Fire Hydrant Testing

Pressure testing of the existing water supply network was undertaken on the 24th February 2026 at three test locations and the results are as follows:

- Fire hydrant outside 209A Whatawhata Road property (HYWHAT0209)
 - Flow 32.4L/S and 355kPa pressure
- Fire hydrant outside 7 Harrogate Place property (HYHARG0007)
 - Flow 32.4L/s and 310kPa pressure
- Fire hydrant outside 102 Farnborough Drive property on Brymer Road (HYBRYMFNBR-1)
 - Flow 34.5L/s and 148kPa pressure

8.3. Strategic Water Connection

The water and wastewater strategic workshop was held with Hamilton City council (HCC) and IAWAI on the 11/02/26. The purpose of the workshop was to discuss possible public water connection points to the HCC water supply network for future servicing the Project.

Maven prepared three possible options for consideration for the workshop.

- Option one: Water supply for the whole development supplied from the HCC water supply network. Create an initial public connection to the existing 150mm dia. MPVC watermain on Ayrshire Drive to service the first 50 lots of the development.

Second public connection to the existing 250mm dia. OPVC watermain on Brymer Road to service another 150 lots.

A new water reservoir would be constructed within the Stage 6 area to service the overall development. There is an existing 560 SSCL bulk main that has been terminated in Brymer Road outside the 207 and 209 Brymer Road properties. This bulk main would be extended up Brymer Road with a 630OD HDPE bulk main that would connect to the new reservoir. The bulk main would be the primary feed to the new water reservoir. A new 315OD watermain would then be extended from the new reservoir down Brymer Road on the western side of the road and it would connect to the new 315OD watermain near the entrance to Stage 6 on Brymer Road. This would provide the third public connection that would service the remainder of the development except for the Stage 1A large lot residential lots.
- Option two: Would have no public connection to the HCC water supply network and the development would use the treated bore water for potable water supply. Establish a new onsite water treatment plant near the existing water bore in Stage 6. Connect the bore water supply to the new onsite water treatment plant. Construct a new portable water supply 315OD HDPE watermain from the treatment plant, through to the Stage 1A area for servicing

the first 50 lots within Stage 1A. Continue to extend the 315OD HDPE through Stages 1B and 1C bulk main to service another 150 lots.

To service the remainder of the residential development the 315OD HDPE watermain would be extended through Stages 4 and 5. A second onsite water treatment plant would be established near the existing water bore located within Stage 5. The bore water supply would then be connected to the new water treatment plant and then the treated water from the water treatment plant connected to the 315OD HDPE watermain to provide the second potable water feed to the network.

- Option three: Public connection to service part the initial stages of the development for servicing the first 200 lots similar to Option one and then use treated bore water supply to service the remainder of the development. Similar to Option two establish the two new onsite water treatment plants and connect the 315OD HDPE bulk main to the treated potable water supply feeds from the two onsite water treatment plants.

The feedback received from HCC and IAWAI for the three options:

- Option one: Construction of a new water reservoir within the Project was identified as a potential servicing option. HCC advised that in conjunction with IAWAI, it will undertake initial feasibility investigations, including strategic reservoir and pressure zone assessments, to determine the viability of this option.
- Option two: HCC advised that it will not accept the vesting of decentralised water treatment infrastructure and does not support this servicing option.
- Option three: HCC advised that it will not support a connection to the Council's reticulated water supply network, where the development is also supplied in part by a decentralised water treatment system.

HCC have engaged their water supply modellers to run series of water modelling scenarios for the water supply connection point options, to determine the capacity and feasibility of each of these options. They advised FW2 should be adopted for the residential areas and FW3 for the apartments and commercial hubs. HCC and IAWAI advised the water supply modelling would be required to confirm the feasibility of the connection options before they would accept any of these servicing options.

8.4. Bore Water Abstraction

A hydrogeological desktop review of the Project development area was undertaken by WGA (April 2025) to consider groundwater as a potable water solution.

Whilst centralised approaches offer long term viability for development, if the HCC boundary is not adjusted then using ground water could provide for development to occur by implementation of Bore Water abstraction, treatment, and storage (Figure 3 – Water Bore).

Further information is contained within the desktop review by WGA April 2025 (Appendix D).

To support the future development, and provide an option for Bore Water abstraction, test bore holes have been undertaken onsite to check the aquifers for quantity and the quality of the potable water. The results confirmed the water quality, and quantity can support this development.

The below calculations outline what water supply demand is required for the domestic use component of the development. Further consultation with council stakeholders will be required to determine the required storage volume and Firefighting flow.

If water bore abstraction is the desired outcome, water allocation consents will be required from Waikato Regional Council to meet the demands of the development area.

Bore water would only be used for firefighting supply for the large lot residential lots, they would be serviced with a non-potable raw water supply from the existing bore with no connection to the main public network.

8.5. Design Flows

The water supply demand design flow calculation results are summarised in the Table 12 below. Refer to Appendix C for the water supply demand calculations.

Stage	Units	People	AD(l/s)	PD(l/s)
1	118	330	0.99	4.97
2	58	162	0.49	2.44
3	36	101	0.30	1.52
4	83	232	0.70	3.50
5	50	140	0.42	2.11
6	57	160	0.48	2.4
7	135	378	1.14	5.69
8	28	78	0.24	1.18
9	48	134	0.4	2.02
10	81	227	0.68	3.41
11	30	84	0.25	1.26
12	41	115	0.35	1.73
10A-1	160	448	1.35	6.74
10A-2	48	134	0.4	2.02
5C-1	48	153	0.46	2.31
10C-2	16	56	0.17	0.84
Overall	1037	2934	8.83	44.14

Table 12: Water Supply demand design flows

8.6. Water Supply Modelling

Mott Macdonald were engaged by HCC/IAWAI to undertake a water supply modelling assessment for the Brymer Farms development. The Brymer Farms – Water Supply Modelling report (WSMR) was prepared by Mott Macdonald on 4th August 2026, to support the fast-track substantive application. Refer to Appendix L for the WSMR for further details.

The purpose of the assessment was to assess the impact of the various fast track development areas on the water network, including the Brymer Farms development. This work informs the decisions by assessing the HCC water supply network capacity and system performance against the Level of Service (LoS) criteria for HCC.

Two water supply demand scenarios were modelled which are shown in Table 13 below.

Scenario	Horizon	Network
Scenario 1	2061 and 2041	Base + one ended 150mm connection on Ayrshire Dr – testing maximum number of lots able to be connected
Scenario 2	2061 and 2041	Base + 250mm loop main connected on Brymer Rd and Ayrshire Dr – testing maximum number of lots able to be connected from Stage 1A to Stage 5B

Table 13: Water Supply demand scenarios (Mott Macdonald)

The water supply demand scenarios were assessed against the criteria items shown in Table 14 below.

Table 2-4 System performance assessment criteria

Criteria	Threshold	Critical criteria
WTP Capacity	Capacity $\geq$ PDD	
Reservoir level	Must not drain within 3 PDD days	
Storage	New reservoir design: Effective storage = 24 hours of 1.15*peak day demand	Replacement timing: Effective storage < 18 hours of 1.15*peak day demand
Pressure	- Minimum pressure >20m - Maximum pressure <80m	- Pressure reduction greater than 0.5 m in areas with a minimum pressure between 18 m and 20 m. - Pressure reduction greater than 0.1 m in areas where pressure is already below 18 m.
Head losses	- New pipe design: $\leq 5\text{m/km}$ for 50mm to 249mm diameter pipes $\leq 3\text{m/km}$ for 250mm to 599mm diameter pipes $\leq 2\text{m/km}$ for $\geq 600\text{mm}$ diameter pipes - Existing pipe replacement timing: 10m/km for 50mm to 249mm diameter pipes 5m/km for 250mm to 599mm diameter pipes 3m/km for $\geq 600\text{mm}$ diameter pipes	Head loss criteria exceeded where it was not exceeded before
Fire fighting	Testing 25l/s (FW2) and 50l/s (FW3) with 10m residual pressure at the hydrant flowed an 1m residual pressure everywhere else in the network.	- Firefighting capacity dropping below 25L/s where previously met. - Firefighting capacity reducing by more than 1 L/s where residential requirements previously not met.

Table 14: System performance assessment criteria (Mott Macdonald)

The water supply modelling results for the two demand scenarios are summarised in Table 15 below.

Table 4-1 Modelling results summary - Scenario 1 and 2

System performance criteria	Critical criteria	Scenario 1 (135 lots)	Scenario 2 (551 lots)
Storage capacity	115% 18hr Demand < 3.4 ML	X	X
Pressure	Pressure reduction less than 0.5 m in areas with a minimum pressure between 18 m and 20 m	✓	✓
	Pressure reduction less than 0.1 m in areas where pressure is already below 18 m	✓	Breach found but not affecting customers
Head losses	Head loss criteria not exceeded where it was not exceeded before	✓	✓
Firefighting	Firefighting capacity NOT dropping below 25L/s where previously met.	✓	✓
	Firefighting capacity NOT reducing by more than 1 L/s where residential requirements previously not met.	✓	✓

Table 15: Modelling results summary – Scenario 1 and 2 (Mott Macdonald)

Key findings are summarised below:

- The effective storage volume of the Dinsdale Reservoir is insufficient to meet the required 18 hours of storage at 115% of the peak day demand for both scenarios, as the reservoir is already operating below the required storage capacity. The reservoir capacity issue requires addressing.
- The hydraulic assessment indicates that, should the reservoir capacity issue be addressed, up to 135 additional lots (150 total lots minus 15 existing lots) can be serviced via a single-ended 1800D PE100 watermain on Ayrshire Drive.
- The hydraulic modelling further indicates that, should the reservoir capacity issue be addressed, a maximum of 551 additional lots can be serviced via two connections on Ayrshire Drive and Brymer Road. The primary constraint is the 250mm filling main supplying the Dinsdale Reservoir, where headloss is predicted to reach 4.99 m/km under the additional demand associated with this level of development.

8.6.1. Existing Reticulation

There is an existing 630D MDPE ridermain and 100mm dia. MPVC watermain running along Harrogate Place and 630D MDPE ridermain and 150mm dia. MPVC watermain running along Ayrshire Drive. There is an existing 250mm OPVC watermain running along Brymer Road near the entrance to Stage 12. There is an existing 560 SSCL water bulk main in Brymer Road, and it terminates at an endcap outside the 207 and 209 Brymer Road properties.

The nearest existing water reservoirs are the Newcastle water reservoir and the Dinsdale water reservoir, and they are both located next to each other, and they are located between 29 and 49 Newcastle Road properties on Newcastle Road.

8.6.2. Proposed Reticulation

The proposed water supply watermain reticulation network will comprise of PE100 3150D, 2500D, 1800D, 1250D PN12.5 PE pipes, with sluice valves and hydrants at appropriate locations throughout. The water supply ridermain will be PE80B 630D PN12.5 PE pipes, and they will generally be located on the opposite side of the road to the proposed watermain throughout the development. Refer to Appendix B for the water supply drawings for further details.

8.1. Staged Water Supply Servicing

A meeting was held between IAWAI/HCC and the client on 23rd July, to formalise an agreement for servicing the development for water and wastewater. IAWAI/HCC advised that for Stage 1 for the first 118 lots could be serviced with a new single ended 1800D PE100 watermain feed, by connecting to the existing 150mm uPVC watermain on Ayrshire Drive. For Stages 2 and 3 could also be serviced with a new 2250D PE100 watermain, that would connect to the existing 200mm uPVC watermain in Grandview Road and then loop onto the 1800D PE100 watermain in Stage 1. For Stages 4-12 a new water reservoir will need to be constructed near Brymer Road within the Stage 12 area to service these stages. Refer to Appendix K for the water supply servicing drawings for further details.

8.2. Lot Connections

All lots will be serviced with lot connections as per RITS guidelines and specifications.

8.3. Connection Points and Staging

- Stage 1 – Extend a 180OD water main from the existing 150mm uPVC watermain in Ayrshire drive through Stage 1 to Road 8 to form a looped network. Transfer the existing Harrowgate connections to the new water main and decommission the redundant main.
- Stages 2 to 3- Connect to the existing 200mm uPVC water main in Grandview Road and extend a 225OD water main along Road 8. Connect to the stage 1 180OD water main to form a looped network.
- Stages 4 to 12 – The new 6 million litre Brymer water reservoir would be constructed in the Stage 6 area. A 630OD bulk feeder from Brymer road will be constructed to feed the reservoir. A new 560OD HDPE watermain would be constructed from the new reservoir down Brymer Road and capped for future connections and a new 315OD HDPE watermain is branched from the 560OD HDPE watermain on Brymer Road that enters Stage 6 of the development. The 315OD water main is capped at SH23 for future connections.

8.4. Firefighting Supply

Reticulation will be designed to provide the development area with a suitable means of potable supply and firefighting supply. The minimum firefighting supply service level for FW2 for residential areas and FW3 for apartments and the commercial hubs.

The water supply requirements for FW2 for firefighting supply are as follows:

- A primary water flow of 12.5 litres/sec within a radial distance of 135m.
- An additional secondary flow of 12.5 litres/sec within a radial distance of 270m.
- The required flow must be achieved from a maximum of one or two hydrants operating simultaneously.
- A minimum running pressure of 200kPa.

The water supply requirements for FW3 for firefighting supply are as follows:

- A primary water flow of 25 litres/sec within a radial distance of 135m.
- An additional secondary flow of 25 litres/sec within a radial distance of 270m.
- The required flow must be achieved from a maximum of three hydrants operating simultaneously.
- A minimum running pressure of 200kPa.

9. Services

9.1. Power

WEL Networks are the power service providers for this area, and they will prepare the power design for this development. The proposed power design will be further developed during the detailed design stage. The proposed power services layout is shown on the C700 services series drawings and shown on the proposed roading typical sections C340 series drawings. Refer to the roading and services drawings in Appendix B for further details.

9.1.1. Underground Overhead Power

There is an existing 33KV high voltage underground power cables that runs along Ayrshire Drive. These cables then head through the 3 Ayrshire Drive property, following the western boundary and then heading east following the southern boundary before terminating at the WEL Networks existing overhead power pole 547378 within the property. From this power pole the power switches from underground power to overhead power. The 33KV overhead power then heads southeast passing through the development.

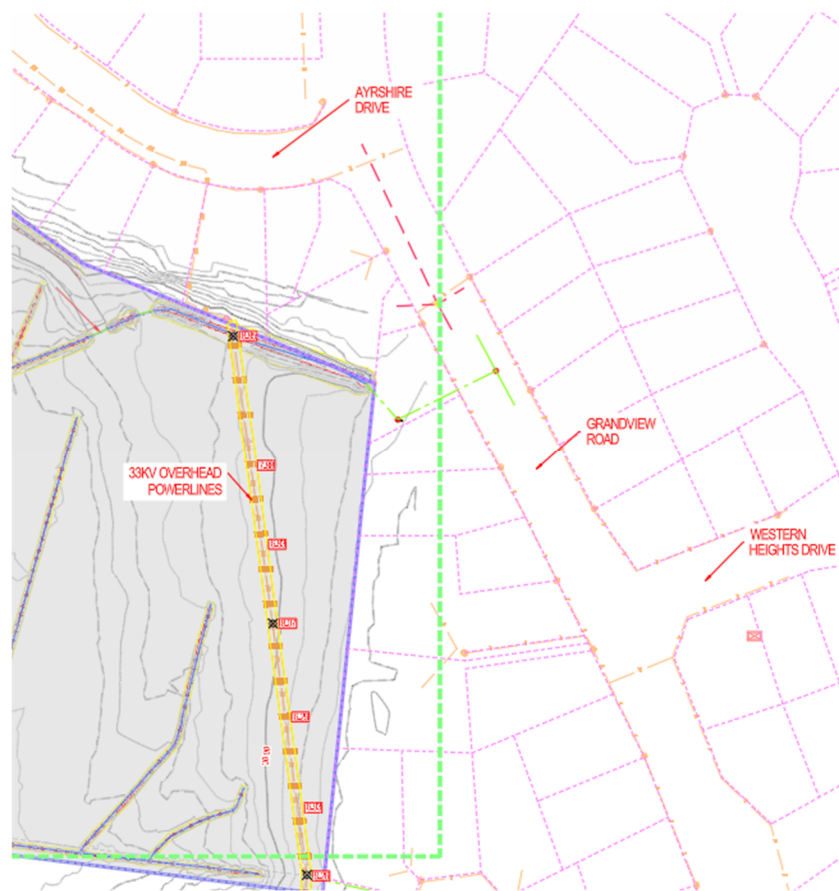


Figure 15: Existing 33KV Overhead Powerlines

The 33KV overhead power lines between 547378 and 547375, would then be switched from overhead power lines to underground power cables. The overhead power poles 547378, 547377 and 547376 would be removed and the overhead power pole 547375 would be retained. The proposed underground 33KV power cables would follow a dedicated power easement through the proposed residential lot following the adjoining boundary through to the proposed collector road. The 33KV underground cables would then follow the road service trench to the south and then would pass

through the stormwater reserve before terminating at the WEL Networks existing overhead power pole 547375.

9.2. Communications

The existing service communications providers near the development site include Chorus, Tuatahi First Fibre and EonFibre.

Tuatahi First Fibre are the selected communications provider, and they will prepare the fibre design for this development. The fibre design will be further developed as part of the detailed design stage. The proposed fibre services layout is shown on the C700 services series drawings and shown on the proposed roading typical sections C340 series drawings. Refer to the roading and services drawings in Appendix B for further details.

9.3. Gas

Firstgas are the gas service providers for this area, and they will prepare the gas network design for this development. The gas network design will be further developed as part of the detailed design stage. The proposed gas services layout is shown on the C700 services series drawings and shown on the proposed roading typical sections C340 series drawings. Refer to the roading and services drawings in Appendix B for further details.

9.4. Service Provisions

We have received the service provision confirmation letters from WEL Networks, Tuatahi First Fibre and Firstgas and they have confirmed they can service the development for power, communications and gas.

10. Conclusions

Stormwater drainage can be provided for the proposed development. Various stormwater design options were considered and with collaboration with the different discipline design specialists and council the stormwater design approach was agreed. The treatment and disposal methods both offer a high amenity value consistent with the urban design ideals.

Wastewater drainage can be provided for the proposed development, through connection to the existing public network, with a combination of wastewater reticulation networks, wastewater pump stations, rising mains, LPS and onsite wastewater treatment for the large lot residential lots within Stage 1A.

There is public water supply infrastructure surrounding the site and a new Brymer water reservoir would be constructed, which can provide potable water and firefighting supply for this proposed development.

Utility providers have confirmed they can service the development for power, communications and gas. We will collaborate with the utility providers to further develop the utility designs during the detailed design phase.

Based on this engineering report we consider that the proposed development can be accommodated at the subject site, without generating any adverse effects to the existing infrastructure and the receiving environment.

11. Limitations

The calculations and assessments included in this report are based on information available at time of issue. To the best of our knowledge, it represents a reasonable interpretation of available information.

This report is solely for our clients use for the purpose for which it is intended in accordance with the agreed scope of work. It may not be disclosed to any person other than the client and any use or reliance by any person contrary to the above, to which Maven has not given its prior written consent, is prohibited.

This report must be read in its entirety and no portion of it should be relied on without regard to the limitations and disclaimers set out.

Maven makes no assurances with respect to the accuracy of assumptions and exclusions listed within this report and some may vary significantly due to ongoing stakeholder engagement.

Appendix A – Stormwater Management Report (Bound Separately)

Appendix B – Engineering Drawings (Bound Separately)

Appendix C – Engineering Calculations



 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 1 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 118 Total Population 330 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 66.08 m³/day Peak Daily Flow (PDF)= 5.12 L/sec Peak Wet Weather Flow (PWWF)= 5.12 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5.124</td> <td style="text-align: center;">0.150</td> <td style="text-align: center;">0.55</td> <td style="text-align: center;">13.31</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	5.124	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
5.124	0.150	0.55	13.31	0.75	OK											

 Maven Waikato	Job Number 119014	Sheet 1	Rev A
Job Title Brymer Farms Calc Title Pump Station Storage and PWWF	Author BD	Date 19/08/2026	Checked TH
As per RITS: Storage sized on 9hrs ADWF Pump Station B PWWF= 5.12 l/s ADWF = 66.08 m3/day Storage Required = 24.78 m3			

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms FUTURE CATCHMENT	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
Refer to C450-1 for catchment details No. of residential dwellings = Catchment area = 66.00 Ha Population Equivalent as per Table 5-3= 70 person per Ha Total Population 4620 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person (max development scenario) Average Daily Flow (ADF)= 924.00 m³/day Peak Daily Flow (PDF)= 71.65 L/sec Peak Wet Weather Flow (PWWF)= 71.65 L/sec																
Pipe Ks (uPVC) = 1.50 <table border="1"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>71.653</td> <td>0.350</td> <td>0.33</td> <td>84.98</td> <td>0.88</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	71.653	0.350	0.33	84.98	0.88	OK
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71.653	0.350	0.33	84.98	0.88	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 1 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
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5.124	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 2 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 58 Total Population 162 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 32.48 m³/day Peak Daily Flow (PDF)= 2.52 L/sec Peak Wet Weather Flow (PWWF)= 2.52 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>2.519</td> <td>0.150</td> <td>0.55</td> <td>13.31</td> <td>0.75</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	2.519	0.150	0.55	13.31	0.75	OK
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2.519	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 3 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 36 Total Population 101 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 20.16 m³/day Peak Daily Flow (PDF)= 1.56 L/sec Peak Wet Weather Flow (PWWF)= 1.56 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.563</td> <td style="text-align: center;">0.150</td> <td style="text-align: center;">0.55</td> <td style="text-align: center;">13.31</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	1.563	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
1.563	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 4 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 83 Total Population 232 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 46.48 m³/day Peak Daily Flow (PDF)= 3.60 L/sec Peak Wet Weather Flow (PWWF)= 3.60 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3.604</td> <td style="text-align: center;">0.150</td> <td style="text-align: center;">0.55</td> <td style="text-align: center;">13.31</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	3.604	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
3.604	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 5 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 50 Total Population 140 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 28.00 m³/day Peak Daily Flow (PDF)= 2.17 L/sec Peak Wet Weather Flow (PWWF)= 2.17 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>2.171</td> <td>0.150</td> <td>0.55</td> <td>13.31</td> <td>0.75</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	2.171	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
2.171	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms STG5C-1 WW DEMAND	Author BD	Date 19/08/2026	Checked TH
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption per RITS)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day				
Bisuness / retail area (Ha) = 0.42 No. of residential apartments = 48 Total Population EQUIV 153 Wastewater Peaking factor 6.7 Using a population value person Average Daily Flow (ADF)= 30.66 m³/day Peak Daily Flow (PDF)= 2.38 L/sec Peak Wet Weather Flow (PWWF)= 2.38 L/sec				
PWW Flow l/s Pipe dia m Gradient % Capacity l/s Velocity m/s Check OK 2.378 0.150 0.55 13.31 0.75 OK				

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 6 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 57 Total Population 160 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 31.92 m³/day Peak Daily Flow (PDF)= 2.48 L/sec Peak Wet Weather Flow (PWWF)= 2.48 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2.475</td> <td style="text-align: center;">0.150</td> <td style="text-align: center;">0.55</td> <td style="text-align: center;">13.31</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	2.475	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
2.475	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 7 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 135 Total Population 378 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 75.60 m³/day Peak Daily Flow (PDF)= 5.86 L/sec Peak Wet Weather Flow (PWWF)= 5.86 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5.863</td> <td style="text-align: center;">0.150</td> <td style="text-align: center;">0.55</td> <td style="text-align: center;">13.31</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	5.863	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
5.863	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 8 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 28 Total Population 78 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 15.68 m³/day Peak Daily Flow (PDF)= 1.22 L/sec Peak Wet Weather Flow (PWWF)= 1.22 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.216</td> <td style="text-align: center;">0.150</td> <td style="text-align: center;">0.55</td> <td style="text-align: center;">13.31</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	1.216	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
1.216	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 9 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 48 Total Population 134 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 26.88 m³/day Peak Daily Flow (PDF)= 2.08 L/sec Peak Wet Weather Flow (PWWF)= 2.08 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>2.084</td> <td>0.150</td> <td>0.55</td> <td>13.31</td> <td>0.75</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	2.084	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
2.084	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 10 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 81 Total Population 227 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 45.36 m³/day Peak Daily Flow (PDF)= 3.52 L/sec Peak Wet Weather Flow (PWWF)= 3.52 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>3.518</td> <td>0.150</td> <td>0.55</td> <td>13.31</td> <td>0.75</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	3.518	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
3.518	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STG10A-1 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption per RITS)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential apartments = 160 Total Population 448 (2.8ppl/apartment - all apartments 2bed or more) 6.7 Using a population value person Average Daily Flow (ADF)= 89.60 m³/day Peak Daily Flow (PDF)= 6.95 L/sec Peak Wet Weather Flow (PWWF)= 6.95 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>6.948</td> <td>0.150</td> <td>0.55</td> <td>13.31</td> <td>0.75</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	6.948	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
6.948	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Brymer Farms Calc Title STG10A-2 WW DEMAND	Author BD	Date 19/08/2026	Checked TH													
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption per RITS)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential apartments = 48 Total Population 6.7 134 <i>(2.8ppl/apartment - all apartments 2bed or more)</i> Using a population value person Average Daily Flow (ADF)= Peak Daily Flow (PDF)= Peak Wet Weather Flow (PWWF)= 26.88 m³/day 2.08 L/sec 2.08 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow <i>l/s</i></th> <th>Pipe dia <i>m</i></th> <th>Gradient <i>%</i></th> <th>Capacity <i>l/s</i></th> <th>Velocity <i>m/s</i></th> <th>Check <i>OK</i></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2.084</td> <td style="text-align: center;">0.150</td> <td style="text-align: center;">0.55</td> <td style="text-align: center;">13.31</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">OK</td> </tr> </tbody> </table>					PWW Flow <i>l/s</i>	Pipe dia <i>m</i>	Gradient <i>%</i>	Capacity <i>l/s</i>	Velocity <i>m/s</i>	Check <i>OK</i>	2.084	0.150	0.55	13.31	0.75	OK
PWW Flow <i>l/s</i>	Pipe dia <i>m</i>	Gradient <i>%</i>	Capacity <i>l/s</i>	Velocity <i>m/s</i>	Check <i>OK</i>											
2.084	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Brymer Farms Calc Title STG10C-2 WW DEMAND	Author BD	Date 19/08/2026	Checked TH													
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption per RITS)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
Bisuness / retail area (Ha) = 0.25 No. of residential apartments = 16 Total Population EQUIV 56 Wastewater Peaking factor 6.7 Using a population value person Average Daily Flow (ADF)= 11.21 m³/day Peak Daily Flow (PDF)= 0.87 L/sec Peak Wet Weather Flow (PWWF)= 0.87 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>0.869</td> <td>0.150</td> <td>0.55</td> <td>13.31</td> <td>0.75</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	0.869	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
0.869	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 11 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 30 Total Population 84 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 16.80 m³/day Peak Daily Flow (PDF)= 1.30 L/sec Peak Wet Weather Flow (PWWF)= 1.30 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.303</td> <td style="text-align: center;">0.150</td> <td style="text-align: center;">0.55</td> <td style="text-align: center;">13.31</td> <td style="text-align: center;">0.75</td> <td style="text-align: center;">OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	1.303	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
1.303	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms STAGE 12 WW DEMAND	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 41 Total Population 115 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 22.96 m³/day Peak Daily Flow (PDF)= 1.78 L/sec Peak Wet Weather Flow (PWWF)= 1.78 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>1.780</td> <td>0.150</td> <td>0.55</td> <td>13.31</td> <td>0.75</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	1.780	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
1.780	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms WW Demand Calc Catchment A (Total)	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 570 Business area (HA) 0.67 Total Catchment area = 27.60 Ha Total Population (equiv) 1749 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 349.86 m³/day Peak Daily Flow (PDF)= 27.13 L/sec Peak Wet Weather Flow (PWWF)= 27.13 L/sec																
Pipe Ks (uPVC) = 0.6 <table border="1"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>27.130</td> <td>0.225</td> <td>0.55</td> <td>38.88</td> <td>0.98</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	27.130	0.225	0.55	38.88	0.98	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
27.130	0.225	0.55	38.88	0.98	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms WW Demand Calc Catchment D	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 41 Total Catchment area = 3.50 Ha Total Population 123 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 24.60 m³/day Peak Daily Flow (PDF)= 1.91 L/sec Peak Wet Weather Flow (PWWF)= 1.91 L/sec																
Pipe Ks (uPVC) = 0.60 <table border="1"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>1.908</td> <td>0.150</td> <td>0.55</td> <td>13.31</td> <td>0.75</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	1.908	0.150	0.55	13.31	0.75	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
1.908	0.150	0.55	13.31	0.75	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A												
Job Title Calc Title	Brymer Farms WW Demand Calc Catchment B	Author BD	Date 19/08/2026	Checked TH												
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																
No. of residential dwellings = 345 Total Catchment area = 22.84 Ha Total Population 1035 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 207.00 m³/day Peak Daily Flow (PDF)= 16.05 L/sec Peak Wet Weather Flow (PWWF)= 16.05 L/sec																
Pipe Ks (uPVC) = 0.60 <table border="1"> <thead> <tr> <th>PWW Flow l/s</th> <th>Pipe dia m</th> <th>Gradient %</th> <th>Capacity l/s</th> <th>Velocity m/s</th> <th>Check OK</th> </tr> </thead> <tbody> <tr> <td>16.052</td> <td>0.225</td> <td>0.55</td> <td>38.88</td> <td>0.98</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK	16.052	0.225	0.55	38.88	0.98	OK
PWW Flow l/s	Pipe dia m	Gradient %	Capacity l/s	Velocity m/s	Check OK											
16.052	0.225	0.55	38.88	0.98	OK											

 Maven Waikato		Job Number 119014	Sheet 1	Rev A																					
Job Title Brymer Farms	Author BD	Date 19/08/2026	Checked TH																						
Calc Title WW Demand Calc Catchment B (Total)																									
As per Waikato Local Authority RITS standards Domestic Average Daily Flow (Water Consumption)= 200 l/person/day Infiltration Allowance= 0 l/Ha/day Surface Water Ingress= 0 l/Ha/day																									
No. of residential dwellings = 1013 Business area (HA) 0.66 Total Catchment area = 53.94 Ha Total Population equiv 2990 Wastewater Peaking factor as per Table 5-2= 6.7 Using a population value person Average Daily Flow (ADF)= 597.94 m³/day Peak Daily Flow (PDF)= 46.37 L/sec Peak Wet Weather Flow (PWWF)= 46.37 L/sec																									
<table border="0"> <thead> <tr> <th>PWW Flow</th> <th>Pipe dia</th> <th>Gradient</th> <th>Capacity</th> <th>Pipe Ks (uPVC) = 0.60</th> <th>Velocity</th> <th>Check</th> </tr> <tr> <th>l/s</th> <th>m</th> <th>%</th> <th>l/s</th> <th></th> <th>m/s</th> <th>OK</th> </tr> </thead> <tbody> <tr> <td>46.368</td> <td>0.225</td> <td>1.00</td> <td>52.44</td> <td></td> <td>1.32</td> <td>OK</td> </tr> </tbody> </table>					PWW Flow	Pipe dia	Gradient	Capacity	Pipe Ks (uPVC) = 0.60	Velocity	Check	l/s	m	%	l/s		m/s	OK	46.368	0.225	1.00	52.44		1.32	OK
PWW Flow	Pipe dia	Gradient	Capacity	Pipe Ks (uPVC) = 0.60	Velocity	Check																			
l/s	m	%	l/s		m/s	OK																			
46.368	0.225	1.00	52.44		1.32	OK																			

 Maven Waikato	Job Number 119014	Sheet 1	Rev A
Job Title Brymer Farms Calc Title Pump Station Storage and PWWF	Author BD	Date 19/08/2026	Checked TH
As per RITS: Storage sized on 9hrs ADWF Pump Station A PWWF= 27.13 l/s ADWF = 349.86 m3/day Storage Required = 131.20 m3 Pump Station B PWWF= 46.37 l/s ADWF = 597.94 m3/day Storage Required = 77.63 m3 *Note: no storage allowance for flows from pump stations A & D. (Telemetry controlled) Pump Station D PWWF= 1.91 l/s ADWF = 24.60 m3/day Storage Required = 9.23 m3			

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 1 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

2.8 people per dwelling
260 l/person/day

Demand

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	118	2.80	330
Total			330

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	330	260	0.99
PD Water	330	1300	4.97

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	330	1300	4.97

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 2 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	58	2.80	162
Total			162

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	162	260	0.49
PD Water	162	1300	2.44

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	162	1300	2.44

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 3 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

2.8 people per dwelling
260 l/person/day

Demand

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	36	2.80	101
Total			101

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	101	260	0.30
PD Water	101	1300	1.52

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	101	1300	1.52

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 4 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

2.8 people per dwelling
260 l/person/day

Demand

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	83	2.80	232
Total			232

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	232	260	0.70
PD Water	232	1300	3.50

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	232	1300	3.50

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 5 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	50	2.80	140
Total			140

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	140	260	0.42
PD Water	140	1300	2.11

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	140	1300	2.11



Job Number
119014

Sheet
1

Rev
A

Job Title	Brymer Farms, Hamilton
Calc Title	Stage 10A-1 - Water Demand

Author
BD

Date
13/08/2026

Checked
TH

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand =
Peak Demand (5x) =

260 litres/person/day
1300 litres/person/day

Population

Proposed Dwellings
Total

Dwellings	People	Occupancy
160	2.80	448
		448

Demand

AD Water
PD Water

Persons	Rate l/p/day	Flow l/s
448	260	1.35
448	1300	6.74

Peak Demand

PD Water

Persons	Rate l/p/day	Flow l/s
448	1300	6.74

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Brymer Farms, Hamilton		Author BD	Date 13/08/2026	Checked TH
Calc Title Stage 10A-2 - Water Demand				

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	48	2.8	134
Total			134

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	134	260	0.40
PD Water	134	1300	2.02

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	134	1300	2.02

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 5C-1 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings (or Ha)	People	Occupancy
Commercial area	0.42	45ppl/ha	19
Proposed Dwellings	48	2.80	134
Total			153

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	153	260	0.46
PD Water	153	1300	2.31

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	153	1300	2.31

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Brymer Farms, Hamilton		Author BD	Date 13/08/2026	Checked TH
Calc Title Stage 10C-2 - Water Demand				

Water Catchment

As per RITS Standard 6.2.3

2.8 people per dwelling

260 l/person/day

Demand

Demand Rates

Average Demand = 260 litres/person/day

Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings (or Ha)	People	Occupancy
Commercial area	0.25	45ppl/ha	11
Proposed Dwellings	16	2.80	45
Total			56

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	56	260	0.17
PD Water	56	1300	0.84

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	56	1300	0.84

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 6 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

2.8 people per dwelling
260 l/person/day

Demand

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	57	2.80	160
Total			160

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	160	260	0.48
PD Water	160	1300	2.40

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	160	1300	2.40

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 7 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	135	2.8	378
Total			378

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	378	260	1.14
PD Water	378	1300	5.69

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	378	1300	5.69

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 8 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	28	2.8	78
Total			78

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	78	260	0.24
PD Water	78	1300	1.18

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	78	1300	1.18

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 9 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	48	2.8	134
Total			134

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	134	260	0.40
PD Water	134	1300	2.02

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	134	1300	2.02

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 10 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

2.8 people per dwelling
260 l/person/day

Demand

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	81	2.8	227
Total			227

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	227	260	0.68
PD Water	227	1300	3.41

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	227	1300	3.41

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 11 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

2.8 people per dwelling
260 l/person/day

Demand

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	30	2.8	84
Total			84

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	84	260	0.25
PD Water	84	1300	1.26

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	84	1300	1.26

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Calc Title	Brymer Farms, Hamilton Stage 12 - Water Demand	Author BD	Date 13/08/2026	Checked TH

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Proposed Dwellings	41	2.8	115
Total			115

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	115	260	0.35
PD Water	115	1300	1.73

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	115	1300	1.73

 Maven Waikato		Job Number 119014	Sheet 1	Rev A
Job Title Brymer Farms, Hamilton	Author BD	Date 13/08/2026	Checked TH	
Calc Title Overall - Water Demand				

Water Catchment

As per RITS Standard 6.2.3

Demand

2.8 people per dwelling
260 l/person/day

Demand Rates

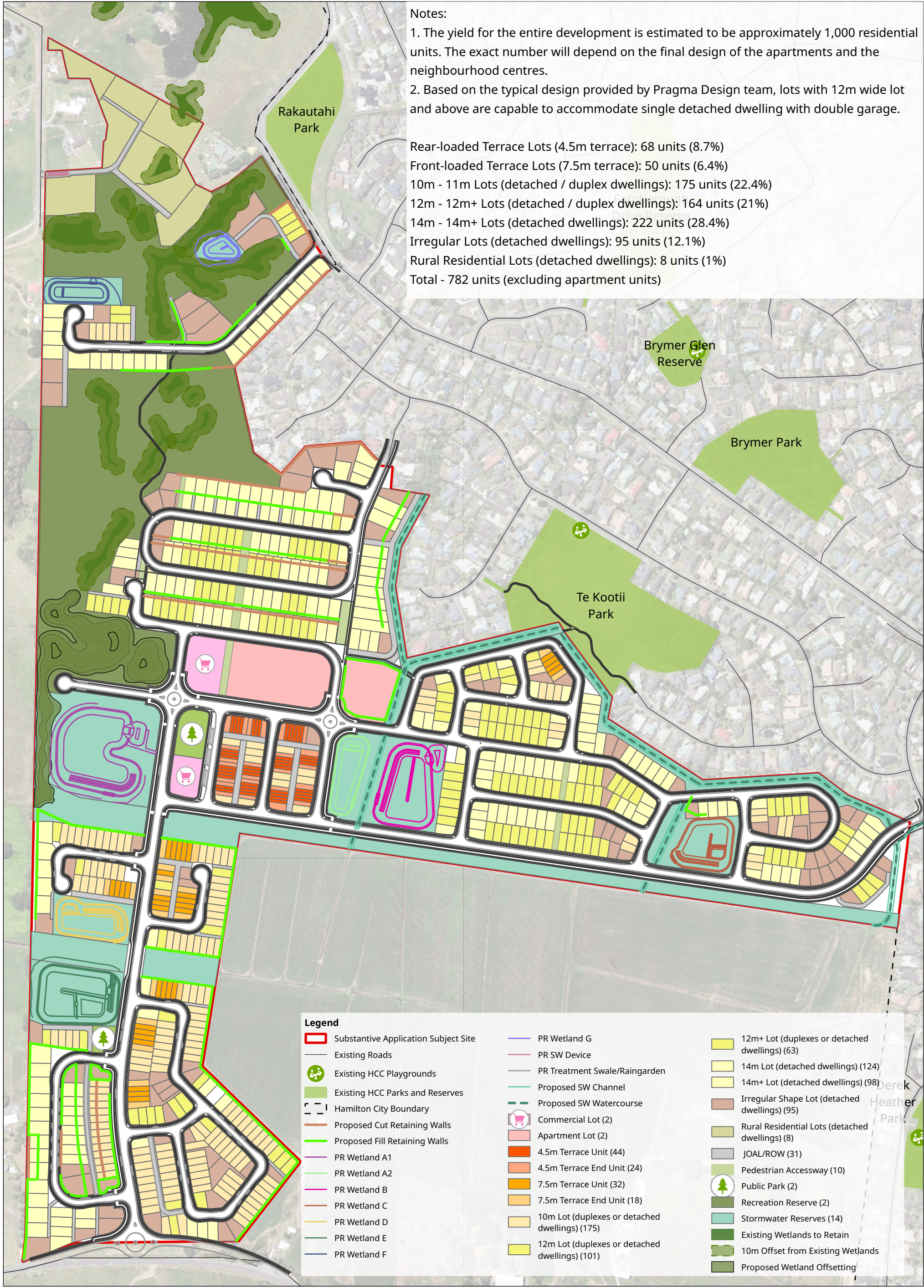
Average Demand = 260 litres/person/day
Peak Demand (5x) = 1300 litres/person/day

Population	Dwellings	People	Occupancy
Commercial area	0.67	45ppl/ha	30
Proposed Dwellings	1037	2.8	2904
Total			2934

Demand	Persons	Rate l/p/day	Flow l/s
AD Water	2934	260	8.83
PD Water	2934	1300	44.14

Peak Demand	Persons	Rate l/p/day	Flow l/s
PD Water	2934	1300	44.14

Appendix D – Barker and Associates Masterplan



Notes:

1. The yield for the entire development is estimated to be approximately 1,000 residential units. The exact number will depend on the final design of the apartments and the neighbourhood centres.

2. Based on the typical design provided by Pragma Design team, lots with 12m wide lot and above are capable to accommodate single detached dwelling with double garage.

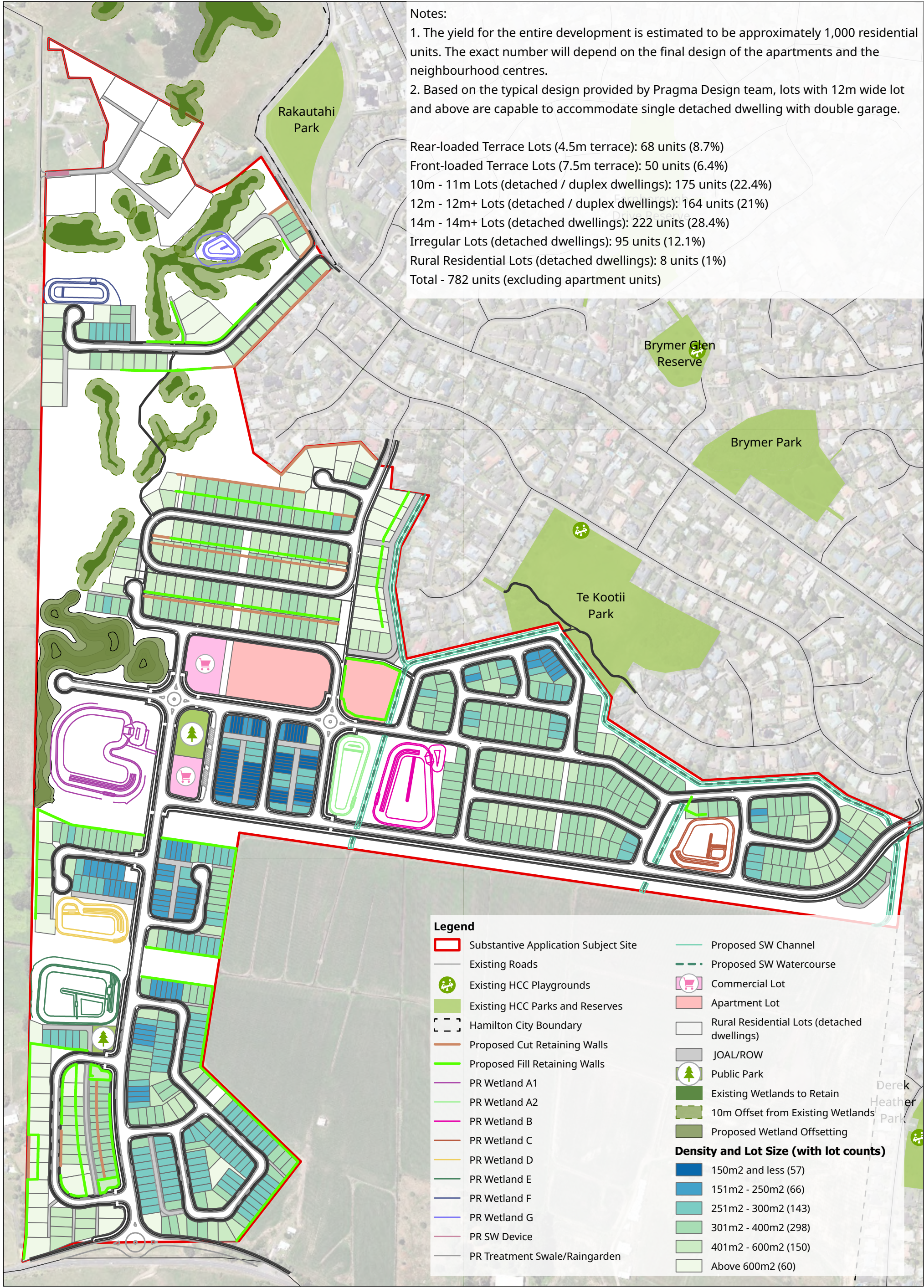
- Rear-loaded Terrace Lots (4.5m terrace): 68 units (8.7%)
- Front-loaded Terrace Lots (7.5m terrace): 50 units (6.4%)
- 10m - 11m Lots (detached / duplex dwellings): 175 units (22.4%)
- 12m - 12m+ Lots (detached / duplex dwellings): 164 units (21%)
- 14m - 14m+ Lots (detached dwellings): 222 units (28.4%)
- Irregular Lots (detached dwellings): 95 units (12.1%)
- Rural Residential Lots (detached dwellings): 8 units (1%)
- Total - 782 units (excluding apartment units)

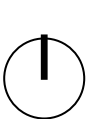
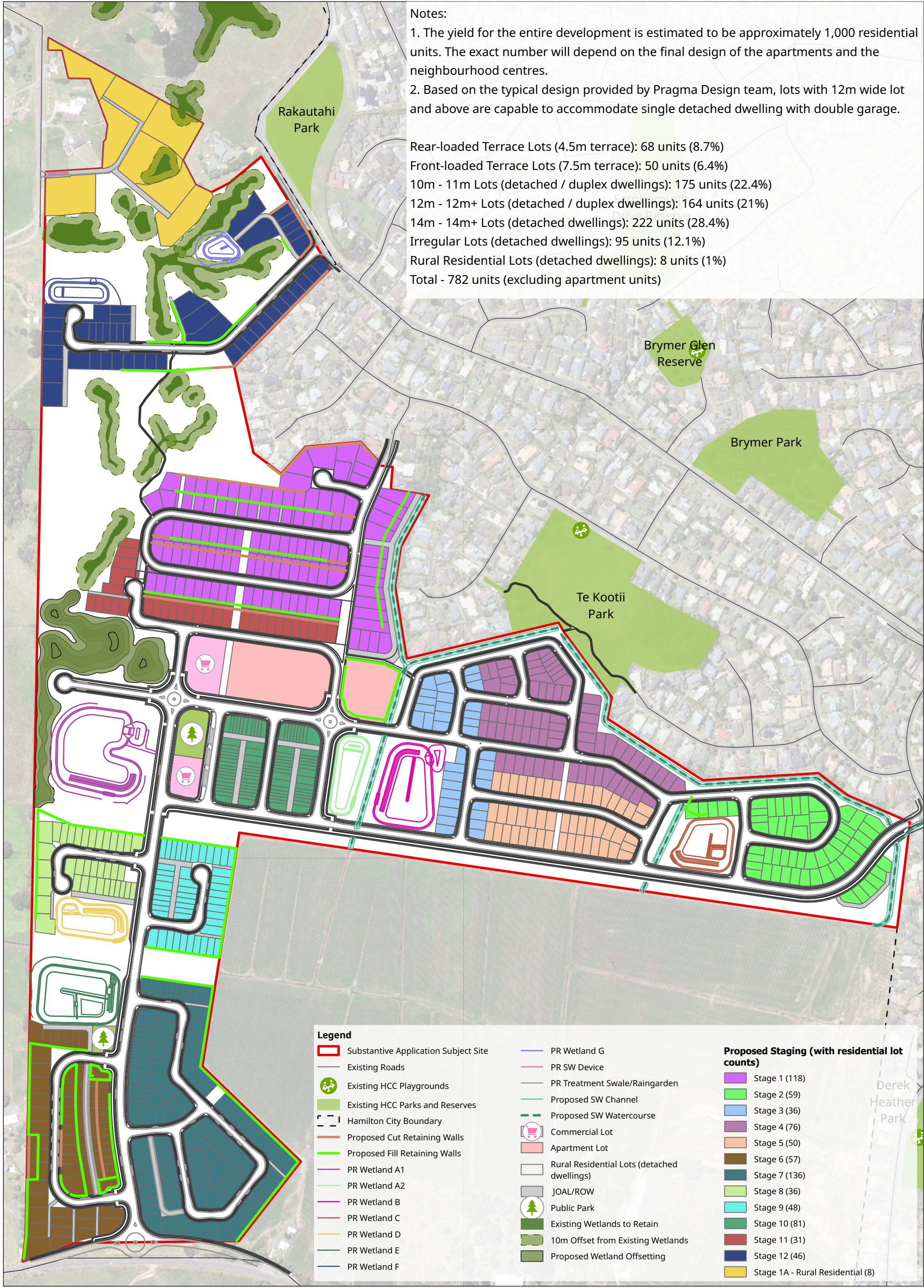
Legend

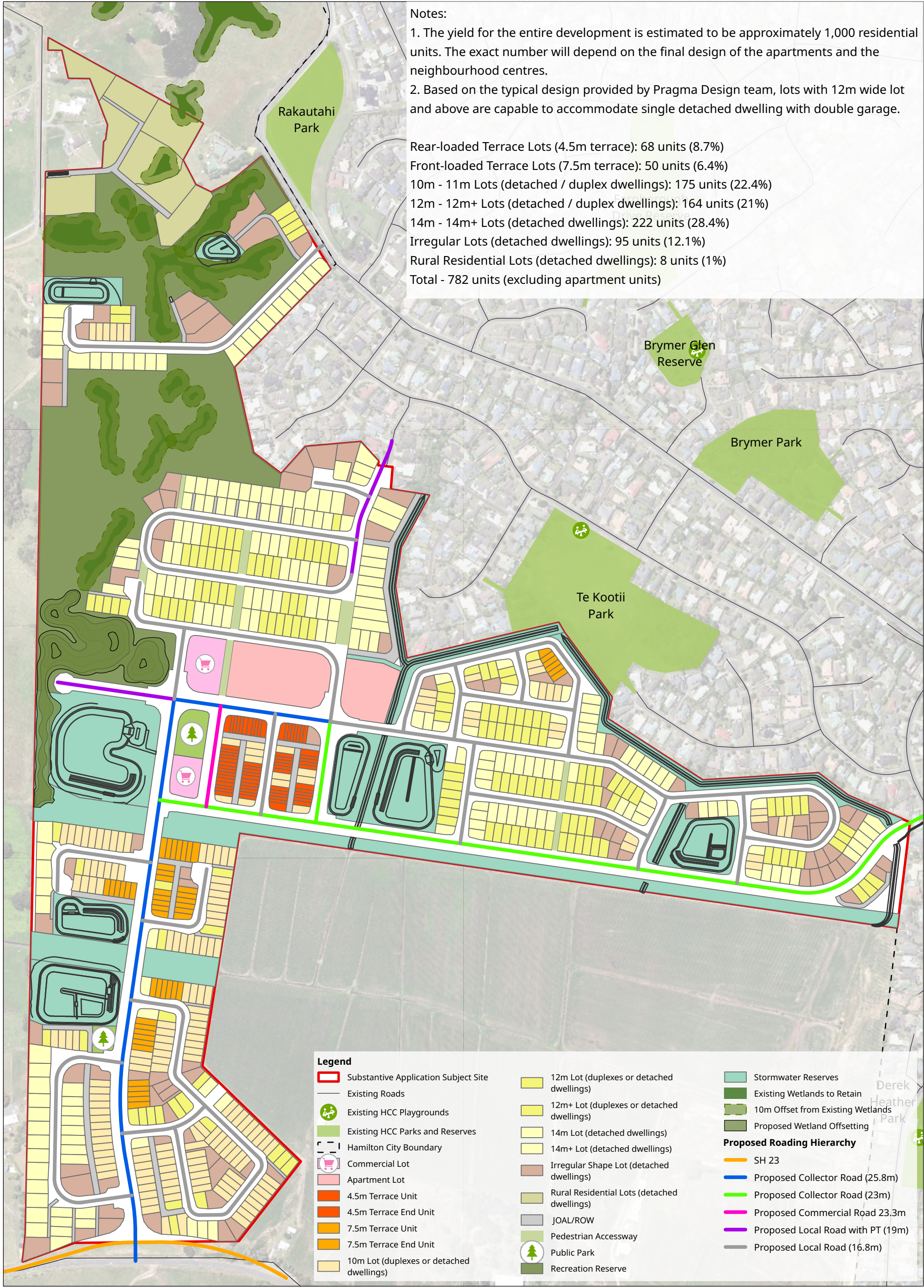
- Substantive Application Subject Site
- Existing Roads
- Existing HCC Playgrounds
- Existing HCC Parks and Reserves
- Hamilton City Boundary
- Proposed Cut Retaining Walls
- Proposed Fill Retaining Walls
- PR Wetland A1
- PR Wetland A2
- PR Wetland B
- PR Wetland C
- PR Wetland D
- PR Wetland E
- PR Wetland F

- PR Wetland G
- PR SW Device
- PR Treatment Swale/Raingarden
- Proposed SW Channel
- Proposed SW Watercourse
- Commercial Lot (2)
- Apartment Lot (2)
- 4.5m Terrace Unit (44)
- 4.5m Terrace End Unit (24)
- 7.5m Terrace Unit (32)
- 7.5m Terrace End Unit (18)
- 10m Lot (duplexes or detached dwellings) (175)
- 12m Lot (duplexes or detached dwellings) (101)

- 12m+ Lot (duplexes or detached dwellings) (63)
- 14m Lot (detached dwellings) (124)
- 14m+ Lot (detached dwellings) (98)
- Irregular Shape Lot (detached dwellings) (95)
- Rural Residential Lots (detached dwellings) (8)
- JOAL/ROW (31)
- Pedestrian Accessway (10)
- Public Park (2)
- Recreation Reserve (2)
- Stormwater Reserves (14)
- Existing Wetlands to Retain
- 10m Offset from Existing Wetlands
- Proposed Wetland Offsetting









Brymer Fast-track Substantive

Lot 22 DP 79526; Lot 3 DP 385271 and Lot 1 DP 87291;
Pt Allotment 365 Parish of Pukete; Pt Lot 2 DP 18355

Appendix E – Wastewater Pumpstation Technical Specifications