

BEFORE THE HEARING PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Proposed Plan Change 5 to the Operative Hamilton
City District Plan

**STATEMENT OF EVIDENCE OF NATHANAEL PAUL SAVAGE
(WASTEWATER AND WATER SUPPLY)**

Dated 2 September 2022

LACHLAN MULDOWNEY

BARRISTER

P +64 7 834 4336 **M** +64 21 471 490

Office Panama Square, 14 Garden Place, Hamilton

Postal PO Box 9169, Waikato Mail Centre, Hamilton 3240

www.lachlanmuldowney.co.nz

INTRODUCTION

1. My full name is Nathanael Paul Savage.
2. I hold the qualifications of Bachelor of Planning (Hons) from The University of Auckland. I also have a Certificate in Engineering Technology (Core Engineering) from the Western Institute of Technology at Taranaki. I have had over 21 years' experience in planning in Local Government in New Zealand. This experience has related to regulatory and policy development roles and infrastructure planning for territorial authorities under the Resource Management Act 1991 (**RMA**) as well as under the Local Government Act 2002 (**LGA**).
3. At present I hold the position of Principal Planner – Infrastructure, in the Infrastructure Planning Team of the Strategic Development Unit in the Development Group at Hamilton City Council (**HCC**), a position I have held for 8 and a half years. Prior to this, I held the position of Principal Planner in the City Planning team at HCC for three years focusing on the review of the Hamilton District Plan.
4. During the pre-notification drafting of PC5, I compiled the infrastructure input behind Appendix 2 – Figure 2-3a (**Attachment 1**) and the table within Chapter 3A of the proposed Plan Change 5 to the Operative Hamilton District Plan (**PC5**) which establishes a staging and sequencing plan for infrastructure in the Peacocke Structure Plan area (**Attachment 2**).
5. I was also the co-client representative for HCC (as the Requiring Authority) for the Southern Links Notice of Requirement process and perform the role of the Southern Links Communications, Consultation and Property Liaison Manager as required by the designation conditions. I am also the HCC Project Sponsor for HCC's Integrated Catchment Management Plan (**ICMP**) programme, which includes the Mangakootukutuku ICMP relevant to Peacocke.

CODE OF CONDUCT

6. I have read the Environment Court Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014 and agree to comply with it. I confirm that the opinions expressed in this statement are within my area of expertise except where I state that I have relied on the evidence of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

SCOPE OF EVIDENCE

7. My evidence, presented on behalf of HCC as proponent of PC5, will briefly outline the approach taken to develop Appendix 2 – Figure 2-3a and the table within Chapter 3A, and the current status of the HCC-led projects delivering strategic infrastructure to enable urbanisation of Peacocke. I have appended an extract from the July 2022 Project Update as **Attachment 3**. My focus will be on water and wastewater because stormwater and transportation evidence are being provided separately by Messrs Ari Craven and Alastair Black respectively. However, given the integrated nature of Appendix 2 – Figure 2-3a and the table within Chapter 3A my evidence may, for completeness, also refer to those types of infrastructure.

EXECUTIVE SUMMARY

8. Figure 2-3a and the table within Chapter 3A was prepared to provide a logical staging and sequencing approach to infrastructure and development. This reflects various PC5, and the Operative District Plan, objectives and policies regarding the integration of land use development and infrastructure.

9. These staging and sequencing provisions are consistent with the overall 3 Waters approach contained within the draft Mangakootukutuku ICMP (Dec 2020 version), and the current HCC programme for delivering strategic infrastructure within Peacocke.

INFRASTRUCTURE STAGING AND SEQUENCING PLAN

10. PC5 and the Operative District Plan contains various objectives and policies regarding the integration of land use development and infrastructure. For example, Chapter 3A DEV01- PSP:023 to 026, and P56 to P60 (**Attachment 4**). These underpin the provisions requiring development to align with the infrastructure staging and sequencing plan contained within Appendix 2 – Figure 2-3a and the table within Chapter 3A. The notified version of these provisions is appended to this evidence for reference.
11. The boundaries for the stages within Figure 2-3a reflect a combination of factors. These are principally derived from the strategic 3 Waters components of the draft Mangakootukutuku ICMP (Dec 2020 version), for example Figure 90: Strategic Wastewater – Peacocke (**Attachment 5**), and the Southern Links arterial network, including the delivery programme. Inherent within the source material are considerations of topography, network design and operational requirements (e.g., ensuring sufficient capability for firefighting capacity, and wastewater networks maximising a gravity-based approach).
12. The sequencing of the stages as per the table within Chapter 3A represents the various network dependencies. For example, later stages require the completion of one or more earlier stages because of the generally linear nature that strategic water and wastewater networks need to be delivered in.

13. Much of the strategic water and wastewater piped network components identified in the first stages of the Chapter 3A table are being delivered as part of the scope of the Southern Links designation. The current HCC programme for delivering strategic infrastructure within the short term is discussed later within this evidence.
14. Appendix 2 – Figure 2-3a and the Chapter 3A table were also internally reviewed by the HCC Infrastructure Planning Team Leader (Tony Denton), Consultant Project Manager - Peacocke Network Infrastructure (Alasdair Gray) and the Peacocke – Project Manager (Sven Ericksen), the latter being responsible for managing the delivery of the water and wastewater components of the Peacocke / Southern Links programme.

COUNCIL-LED INFRASTRUCTURE DELIVERY

15. Various strategic infrastructure components contained within Appendix 2 – Figure 2-3a and the Chapter 3A table are currently being delivered by HCC through the 10-Year Plan funded Peacocke / Southern Links programme, which includes funding assistance provided through central government via the Housing Acceleration Fund and Waka Kotahi NZ Transport Agency subsidies.
16. For convenience, the appended version of the Chapter 3A table highlights elements that are being delivered by HCC as part of the Peacocke / Southern Links programme of works.
17. For completeness, some components of the Chapter 3A table are expected to be delivered by developers as part of private development proposals, for example collector roads, some wastewater pump stations, sub-catchment stormwater facilities. The notes following Chapter 3A table make reference to this expectation.

CONCLUSION

18. In general, the content of Appendix 2 – Figure 2-3a and the Chapter 3A table aligns with the strategic water and wastewater approach outlined in the draft Mangakootukutuku ICMP and a logical staged and sequenced delivery of infrastructure, including reflecting those elements being delivered as part of the Southern Links related package of works.

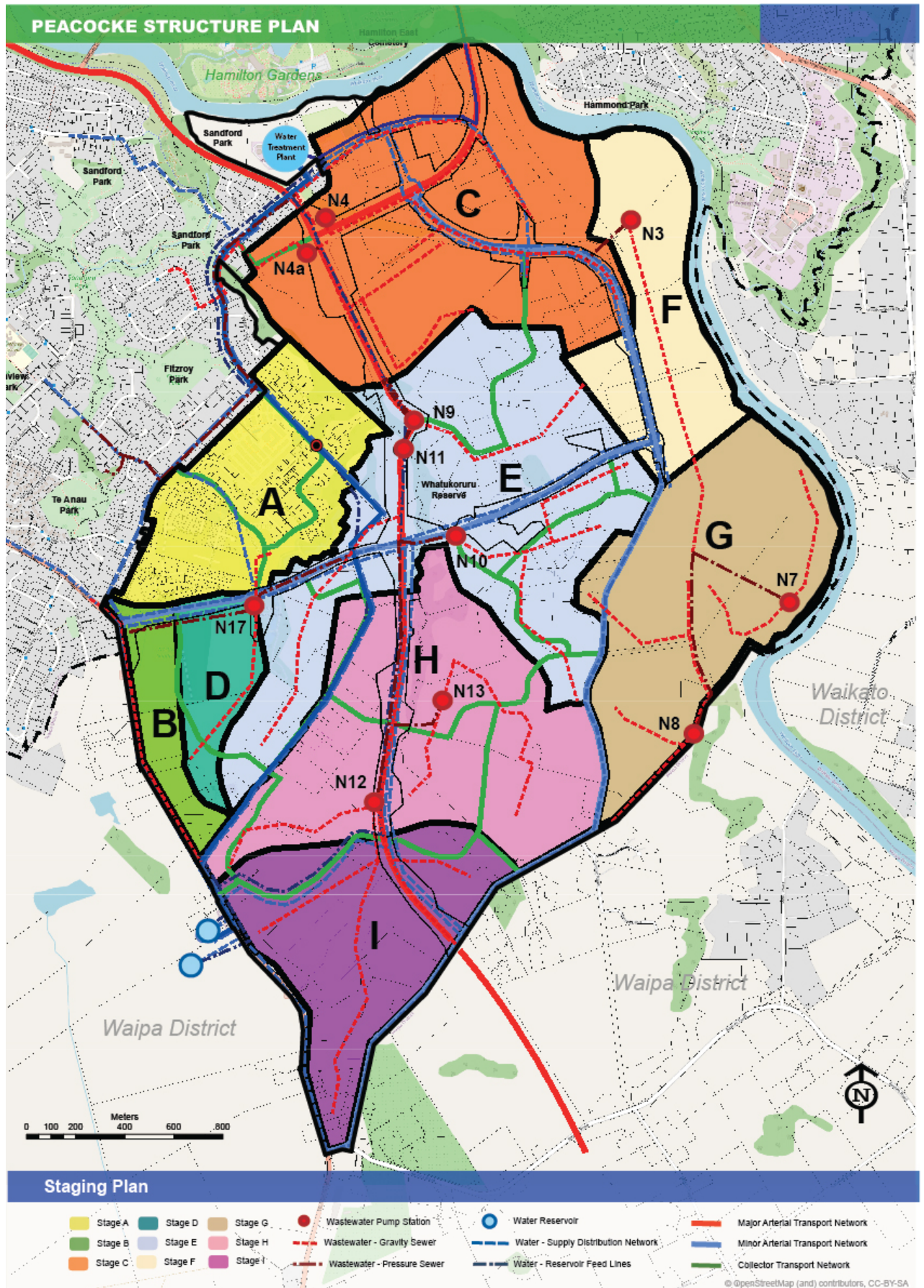
19. The proposed plan change provisions I have referred to in my evidence appropriately address the necessary alignment and integration between the urbanisation of land within the Peacocke Structure Plan area and the public and private water and wastewater infrastructure needed to service the new land uses associated with urbanisation.

Nathanael Paul Savage

2 September 2022

ATTACHMENT 1

Figure 2-3a: Peacocke Structure Plan – Staging and Infrastructure



ATTACHMENT 2



creating opportunities for recreation and community interaction. These are to be of a small scale and size as to not undermine the role and function of the Local Centre.

Eight neighbourhood centres providing approximately 2,600m² GFA between them, ranging from 300m² - 800m² of GFA have been identified within the Peacocke area. These are small in size and serve a local function only. The locations have been chosen to provide a wide distribution across the growth cell maximising the amount of residential land within a five-minute walking distance of the centres. Location is important for neighbourhood centres, which depend on being highly accessible to their immediate catchments for their success and to adequately provide for community needs. The location would enable neighbourhood centres to be comprised of approximately three to seven stores in size and would provide good accessibility to the majority to the Peacocke area population.

The centres are strategic located to facilitate public transport and accessibility, and adjacent to neighbourhood parks or other open space. Residential accommodation can be located on the first floor to provide added surveillance and support vibrancy of the centres. Along with apartments being incorporated into the development of the site it is anticipated that there will be a higher concentration of residential development in close proximity to these centres to encourage walking and cycling and support the development of sustainable neighbourhood centres. The ground floor level should have active frontages facing the street, including extensive use of windows with facades designed to create visual interest and character.

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Peacocke Infrastructure and Staging

A staging programme has been developed to ensure urbanisation does not occur out of sequence with the delivery of key strategic infrastructure.

The staging of development in Peacocke starts in the north in the vicinity of the Water Treatment Plant and then proceeds in a southerly direction along Peacocke Road and in the west from the newly completed Ohaupo Road/SH3 and East/West minor arterial roundabout. Development shall occur in accordance with the infrastructure staging plan (Appendix 2 – figure 2-3a). This plan sets out the intended stages of development for Peacocke reflecting the sequenced delivery of strategic infrastructure.



Stage*	Preceding stage(s) required**	Strategic Infrastructure Required***			
		Transportation	Wastewater	Water****	Stormwater
A					<ul style="list-style-type: none"> Centralised stormwater management devices relevant to the sub-catchment(s) and Integrated Catchment Management Plan to be available Provision for overland flow paths
B		<ul style="list-style-type: none"> East-west minor arterial (stage 1) and Ohaupo Road/SH3 roundabout 	<ul style="list-style-type: none"> Mains extension along east-west minor arterial (stage 1) and Ohaupo Road/SH3 roundabout 	<ul style="list-style-type: none"> Distribution mains extension along east-west minor arterial (stage 1) and Ohaupo Road/SH3 roundabout 	
C		<ul style="list-style-type: none"> Waikato River Bridge, Wairere Drive extension, to the north-south major arterial Peacocke Road urban upgrade to local standard north of intersection with Wairere Drive extension Peacocke Road urban upgrade to minor arterial standard south of intersection with Wairere Drive extension Weston Lea Drive urban upgrade New collector road linkage from Plateau Drive to Wairere Drive extension (for western catchment) 	<ul style="list-style-type: none"> N4 and N4a pump stations and connecting mains Fitzroy Diversion Waikato River Bridge and Transfer Main to far eastern interceptor at Gordonton Road, Wairere Drive, Crosby Road intersection. 	<ul style="list-style-type: none"> Distribution mains along Peacocke Road Distribution mains along Weston Lea Drive 	
D		<ul style="list-style-type: none"> East-west minor arterial (stage 1) and Ohaupo Road/SH3 roundabout New collector road (if connecting to Hall Road then Hall Road urban upgrade to collector standard and upgrades to Hall Road/ SH3 intersection will also be required) 	<ul style="list-style-type: none"> N17 pump station N4 and N4a pump stations and connecting mains Fitzroy Diversion Waikato River Bridge and Transfer Main to far eastern interceptor at Gordonton Road, Wairere Drive, Crosby Road intersection. 	<ul style="list-style-type: none"> Distribution mains extension along east-west minor arterial (stage 1) and Ohaupo Road/SH3 roundabout 	
E	C	<ul style="list-style-type: none"> East-west minor arterial to Peacocke Road from Ohaupo Road/SH3 roundabout 	<ul style="list-style-type: none"> Mains extension along north-south major arterial corridor and east-west minor arterial (stage 2) 	<ul style="list-style-type: none"> Distribution mains along Peacocke Road (from Stage F) Distribution mains along East-west 	

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Stage*	Preceding stage(s) required**	Strategic Infrastructure Required***			
		Transportation	Wastewater	Water****	Stormwater
		<ul style="list-style-type: none"> Peacocke Road urban upgrade to minor arterial standard (from Stage F) Hall Road urban upgrade to collector standard and connection to east-west minor arterial, and upgrades to Hall Road/ SH3 intersection Peacocke Lane urban upgrade to collector standard New collector road linkages in the south-eastern catchment 	<ul style="list-style-type: none"> Diversion of flows from Stage D to Stage E network N9 (and N11 for the western catchment, and N10 for the south-eastern catchment) pump stations and connecting mains 	<ul style="list-style-type: none"> minor arterial (stage 1 and 2) to Peacocke Road Distribution mains along Hall Road and connections to close the loop with Stage B and D mains 	
F	C	<ul style="list-style-type: none"> Peacocke Road urban upgrade to minor arterial standard New north-south collector road 	<ul style="list-style-type: none"> N3 pump station and connecting mains 	<ul style="list-style-type: none"> Distribution mains along Peacocke Road 	
G	C, F	<ul style="list-style-type: none"> Peacocke Road urban upgrade to minor arterial standard New collector road linkages 	<ul style="list-style-type: none"> N7 (for the eastern catchment) and N8 (for the southern catchment) pump stations and connecting mains 	<ul style="list-style-type: none"> Distribution mains along Peacocke Road 	
H	C, E	<ul style="list-style-type: none"> North-south major arterial (full length) and Cobham Drive Bridge upgrading Peacocke Road urban upgrade to minor arterial standard (including from Stage F and G) New collector road linkages including linkages to Hall Road 	<ul style="list-style-type: none"> N12 (and N13 for the eastern catchment) pump stations and connecting mains 	<ul style="list-style-type: none"> Distribution mains along North-south major arterial Distribution mains along Peacocke Road Distribution mains along Hall Road 	
I	C, E, H	<ul style="list-style-type: none"> Peacocke Road urban upgrade to minor arterial standard 	<ul style="list-style-type: none"> Connecting mains to N12 pump station 	<ul style="list-style-type: none"> Distribution mains completing loop along North-south 	

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<u>Strategic Infrastructure Required***</u>					
<u>Stage*</u>	<u>Preceding stage(s) required**</u>	<u>Transportation</u>	<u>Wastewater</u>	<u>Water****</u>	<u>Stormwater</u>
		<u>(including from Stage F, G and H)</u> <ul style="list-style-type: none"> <u>New collector road linkages</u> 		<u>major arterial, Hall Road, Peacocke Road and Ohaupo Road/SH3</u>	

* Stage boundaries take into account a range of factors including existing contours, existing and planned water and wastewater network sub-catchments, and transportation infrastructure networks and connectivity.

** Strategic infrastructure from these preceding stages will be requiring, including relevant connections.

*** In addition, localised and on-lot infrastructure and connections will be required. This should generally not influence sequencing of other stages. The delivery of most strategic infrastructure is expected to be Council-led. However, some of the infrastructure identified, such as new and upgraded collector roads, stormwater infrastructure, and various pumpstations and distribution mains, are expected to be developer-delivered to Council specifications.

**** A new reservoir, and associated feed lines and connecting mains, and Water Treatment Plant upgrades (e.g. High-lift pumpstation) will be needed as the growth demands approaches the operational limits of the Hamilton South reservoir and plant.

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ATTACHMENT 3

HCC Southern Links / Peacocke delivery programme

(extract from July 2022 Project Update)

Completed projects

- **Wairere/Cobham Drive intersection** opened in July 2022.
- **SH3/Ohaupo Road Roundabout and East-West (Minor) Arterial Road Stage 1** opened in December 2020.
- **Northern wastewater pipelines** from Crosby Road, Chartwell to Wairere Drive extension was completed in June 2022.

Ongoing projects

Project	Current Phase	Construction START	Construction END	Commentary
Wairere Drive extension and new Waikato River bridge	<i>Construction</i>	<i>October 2020</i>	<i>Mid to late-2023</i>	Construction is under way.
Wastewater Transfer Pump Station	<i>Construction</i>	<i>December 2021</i>	<i>June 2023</i>	Construction is under way.

Future projects

Project	Current Phase	Forecast Construction START	Forecast Construction END	Commentary
East-West (Minor) Arterial Road Stage 2	<i>Procurement</i>	<i>December 2022</i>	<i>Mid-2025</i>	Design for the East-West (Minor) Arterial Road (Hall Road to Peacocke Road) is complete, and procurement of a main contractor is under way. Construction is expected to start in Summer 2022/23. Final design work and pre-procurement planning for the balance (Hall Road to SH3 / Ohaupo intersection) continues. Construction of this section is expected to be completed by Mid-2025.
Urban Upgrade of Peacocke Road to new East-West (Minor) Arterial Road	<i>Procurement</i>	<i>December 2022</i>	<i>Mid-2025</i>	Design for the balance of the urban upgrade of Peacockes Road to the new East-West (Minor) Arterial Road is complete and procurement of a main contractor is under way. Construction is expected to start in Summer 2022/23.

North-South (Major) Arterial Road	<i>Land acquisition only</i>	Construction is not within the current 10-Year Plan timeframe. Land acquisition between Peacocke Road and East-West (Minor) Arterial is under way to support strategic wastewater work
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Project overview map



ATTACHMENT 4

	<p>2. <u>Designing the transport network to provide safe, direct and universally accessible routes for people walking and cycling throughout the structure plan area.</u></p> <p>3. <u>Integrating with land use to support the provision of a frequent public transport service.</u></p>	<u>DEV01-PSP: P49</u> <u>DEV01-PSP: P50</u> <u>DEV01-PSP: P51</u> <u>DEV01-PSP: P52</u> <u>DEV01-PSP: P53</u>
<u>DEV01-PSP: O20</u>	<u>The transport network is designed to be a high amenity environment that incorporates stormwater management.</u>	<u>PREC1-P P43</u> <u>PREC1-P P49</u>

Cultural Outcomes

REFERENCE	OBJECTIVE	RELEVANT POLICIES
<u>DEV01 – O21</u>	Protect and celebrate historic and culturally important sites or features	<u>DEV01-PSP: P54</u> <u>DEV01-PSP: P55</u>
<u>DEV01 – O22</u>	<u>Identify, communicate and promote the Maaori history of the Peacocke area.</u>	<u>DEV01-PSP: P54</u> <u>DEV01-PSP: P55</u>

Infrastructure Network

REFERENCE	OBJECTIVE	RELEVANT POLICIES
<u>DEV01-PSP: O23</u>	New urban development is appropriately serviced and properly integrated to minimise city network impacts.	<u>DEV01-PSP: P55</u> <u>DEV01-PSP: P56</u> <u>DEV01-PSP: P57</u> <u>DEV01-PSP: P58</u>
<u>DEV01-PSP: O24</u>	Effective and integrated management of Three Waters so as to sustainably manage the impact of development on the City's natural and physical resources.	<u>DEV01-PSP: P59</u> <u>DEV01-PSP: P60</u>
<u>DEV01-PSP: O25</u>	<u>Development of the Peacocke Structure Plan area occurs in a staged manner that ensures the efficient and effective delivery of infrastructure.</u>	<u>DEV01-PSP: P55</u> <u>DEV01-PSP: P56</u> <u>DEV01-PSP: P57</u> <u>DEV01-PSP: P58</u> <u>DEV01-PSP: P59</u> <u>DEV01-PSP: P60</u>
<u>DEV01-PSP: O26</u>	<u>The timing, type and intensity of new urban development is integrated and aligns with the planning and provision of network infrastructure.</u>	<u>DEV01-PSP: P55</u> <u>DEV01-PSP: P56</u> <u>DEV01-PSP: P57</u> <u>DEV01-PSP: P58</u> <u>DEV01-PSP: P59</u> <u>DEV01-PSP: P60</u>

DEV01-PSP: P50	<u><i>The design and operation of the transport system shall priorities the movement of pedestrians and cyclists over vehicles.</i></u>
DEV01-PSP: P51	<u><i>Ensure connectivity and integration between developments.</i></u>
DEV01-PSP: P52	<u><i>On Arterial and Collector Transport Corridor motor-vehicles shall be physically separated from shared paths and cycleways.</i></u>
DEV01-PSP: P53	<u><i>Transport corridors are designed to provide a high level of amenity and include space to provide for street trees and stormwater management</i></u>

Cultural Outcomes

DEV01-PSP: P54	Respect known pa sites, borrows pits and other cultural associations with waterways and the land, through the creation of protective reserves or enlightening developers to ways of integrating these features into new developments for the benefit of all stakeholders.
DEV01-PSP: P55	<u><i>Ensure the Maori history of the site is communicated through place names and the design of public spaces and structures.</i></u>

Infrastructure Network

DEV01-PSP: P56	The use of land for urban development will not be allowed unless appropriate infrastructure is provided for and the servicing of this land will maintain the efficiency and sustainability of regionally significant existing and planned infrastructure.
DEV01-PSP: P57	New development is able to be adequately serviced in terms of <u>Three Waters</u> and transport infrastructure.
DEV01-PSP: P58	Development is co-ordinated with the provision of infrastructure.
DEV01-PSP: P59	Staging and sequencing is in general accordance with any staging indicated on the relevant Structure Plan.
DEV01-PSP: P60	Three Waters will be managed in accordance with the relevant <u>Integrated Catchment Management Plan</u> .
DEV01-PSP: P61	Integrated Catchment Management Plans shall be developed to determine how to manage Three Waters in an effective and integrated manner including by: <ol style="list-style-type: none"> 1. Minimising the effects of urban development on downstream receiving waters. 2. Managing the run-off from the different relief and soil types in an integrated manner. 3. Sustaining groundwater levels in peat soils as far as practicable. 4. Safeguarding and enhancing the natural functioning and ecological health of freshwater bodies and areas of indigenous vegetation, water features and habitats.



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	<ol style="list-style-type: none"> 5. Retaining a hydrological cycle close to the pre-development hydrological cycle as far as practicable. 6. Maintaining stormwater discharge from the catchment to at or below pre-development levels. 7. Incorporating Low Impact Urban Design and Development (LIUDD) principles. 8. Identifying and incorporating appropriate water-sensitive techniques. 9. Recognising social, economic, environmental and cultural objectives for the catchment.
DEV01-PSP: P62	Integrated Transport Modelling is undertaken for all Structure Plan areas.
DEV01-PSP: P63	Movement routes are integrated with surrounding neighbourhoods and existing and planned transport networks.
DEV01-PSP: P64	Enable connectivity with other undeveloped adjoining sites.
DEV01-PSP: P65	The transport network supports efficient passenger transport and opportunities for walking and cycling.
DEV01-PSP: P66	Environmental impacts of building new transport corridor infrastructure are minimised.
DEV01-PSP: P67	Opportunities for improved safety, accessibility, connectivity and efficiency within the transportation network are provided.
DEV01-PSP: P68	Sensitive land uses avoid adverse effects on and from regionally significant infrastructure and regionally significant industry.
DEV01-PSP: P69	Development to avoid adverse effects on the safe, efficient and effective operation and use of existing or planned infrastructure.
DEV01-PSP: P70	Manage stormwater to minimise the effect of urban development on Mangakotukutuku stream values and functions, maintain the ability of the stream to continue to provide habitat for threatened aquatic species and minimise adverse effects on the stream water quality and habitat.

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Peacocke Structure
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ATTACHMENT 5

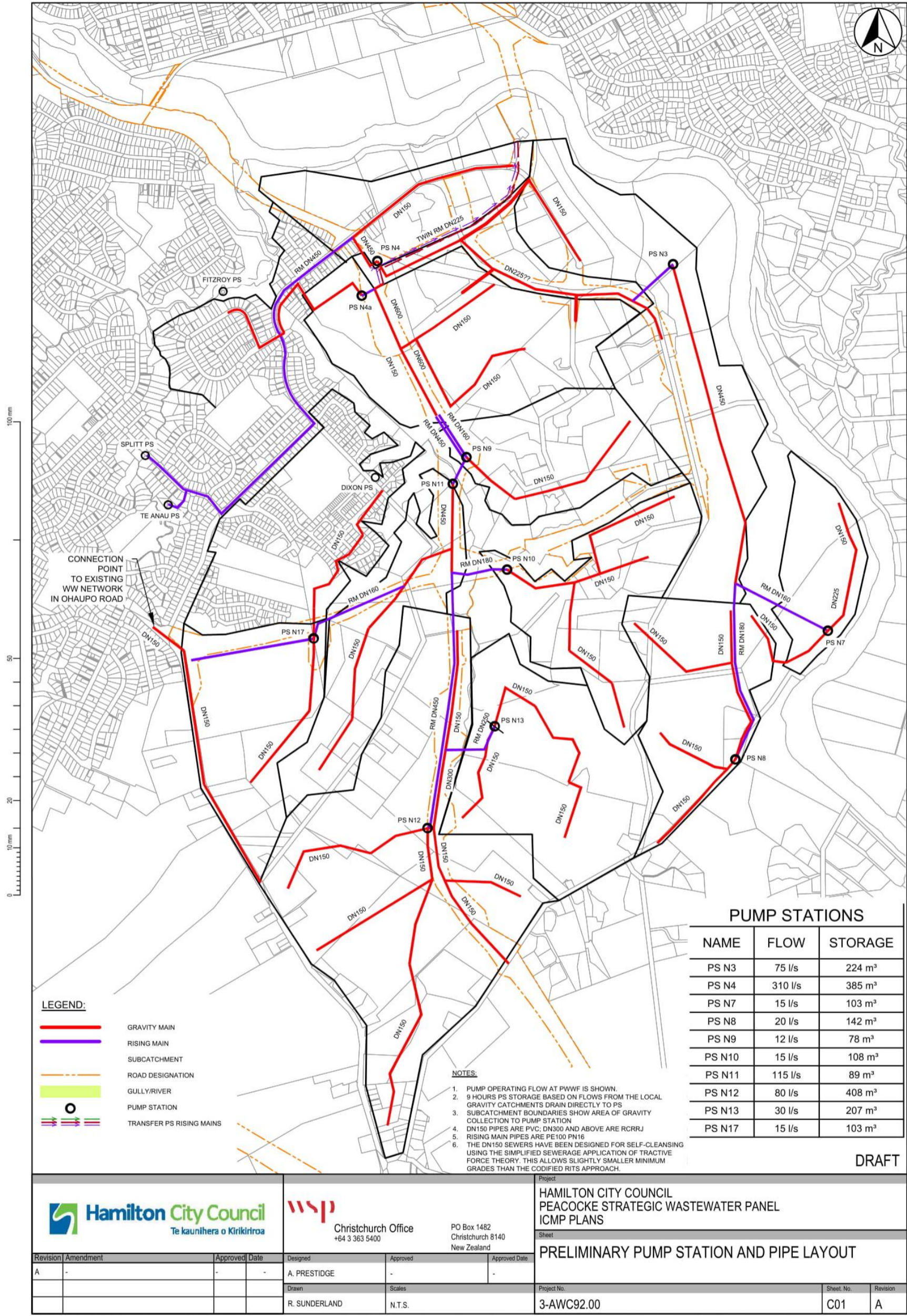


Figure 90: Strategic Wastewater – Peacocke