

# Stormwater Management Plan summary

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| SMP Title                          | Stormwater Management Plan for Private Plan Change 25 – Warkworth North |
| SMP Date                           | 7 September 2020                                                        |
| SMP Version                        | Rev 1                                                                   |
| SMP prepared by                    | Chester                                                                 |
| SMP prepared for:                  | GP (Turnstone Capital) Limited                                          |
| Location                           | Stubbs Farm, Falls Road, Warkworth                                      |
| Consolidated Receiving Environment | Mahurangi                                                               |
| Stormwater Catchment               | Warkworth                                                               |
| Development type                   | Greenfield                                                              |
| SMP Purpose                        | Plan Change                                                             |
| Unitary Plan Precinct              | Warkworth North                                                         |
| Resource consent reference         | -                                                                       |

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|------------------|---------------------------------------------------------------------------------------------|
| HW Reference     | 2019-015                                                                                    |
| Date SMP adopted | Provisional approval 7 September 2020.<br>Plan Change operative November 2021. SMP adopted. |

## Notes:

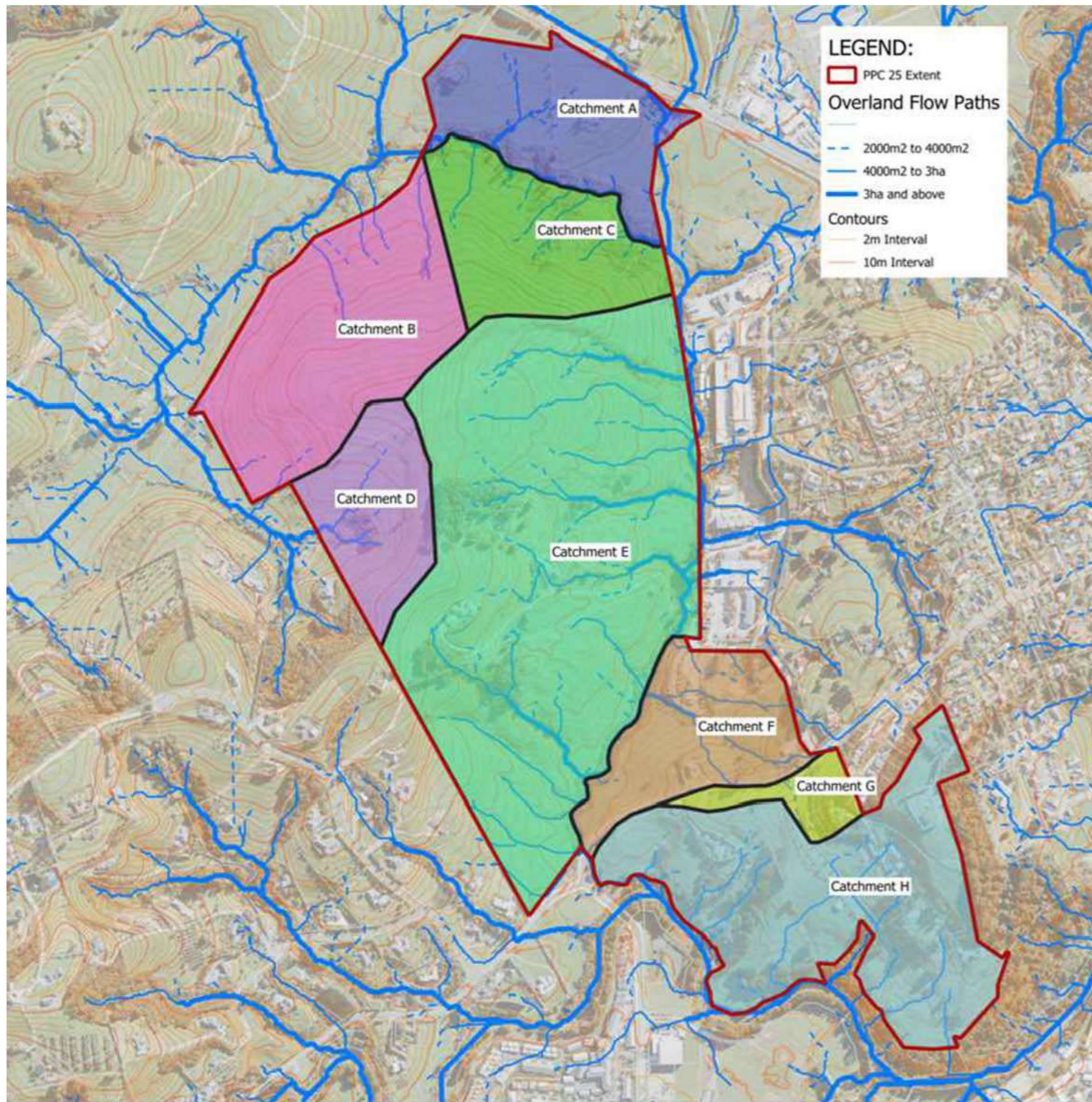
Plan Change 25 operative November 2021.

This document is prepared to provide a summary of the stormwater management requirements within the adopted Stormwater Management Plan. To see the full Stormwater Management Plan please contact [HWDevelopment@aucklandcouncil.govt.nz](mailto:HWDevelopment@aucklandcouncil.govt.nz)

## Proposed stormwater management

| Stormwater management catchment | Proposed land use                                                                                                                                                                                                                    | Receiving environment (type & SEA) | Water quality management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Hydrology mitigation (retention)                                                                                                                                                                                                                                                                                                                                                                                       | Hydrology mitigation (detention)                                                                                                                                                                                                                                    | Flood management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Outlet design                                                                                                                                                                                                                                   | Assets to be vested with council                                                                                                                                                                                            | General comments                                                                                                                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Catchment A                     | <ul style="list-style-type: none"> <li>Business – Mixed Use</li> <li>Business – General Business</li> </ul>                                                                                                                          | Stubbs Stream<br>Above Falls Road  | <ul style="list-style-type: none"> <li>All contaminant generating</li> <li>impervious areas are to be treated by a water quality device designed in accordance with GD01 or a suitably approved device for the relevant contaminants with a preference for at or near-source treatment devices.</li> <li>All contaminant Generating impervious areas to be drained into</li> <li>appropriate gross pollutant traps and/or property treatment devices.</li> <li>Inert building materials are to be utilised (e.g. Inert roof material).</li> </ul> | <ul style="list-style-type: none"> <li>SMAF 1 hydrology mitigation requirements as per Table E10.6.3.1.1 of the AUP is required with infiltration the preferred retention method for paved areas, however this is subject to site specific soakage assessment and approval from a geotechnical engineer.</li> <li>Re-use /rainwater harvesting is the preferred method to achieve retention for roof areas.</li> </ul> | <ul style="list-style-type: none"> <li>SMAF 1 hydrology mitigation requirements as per Table E10.6.3.1.1.</li> <li>To be achieved through at-source (rain tanks, bioretention and communal dry detention basins subject to site specific investigations.</li> </ul> | <ul style="list-style-type: none"> <li>Stormwater detention for the 10% and 1% AEP flood management is not required in the long term.</li> <li>Temporary attenuation may be required for staging that occurs before the upgrade to Falls Road culvert (AT asset).</li> <li>Use streams and their associated riparian margins to provide storage and conveyance to manage flood waters where applicable.</li> <li>Avoid locating buildings or infrastructure within the 1% AEP floodplain, or develop to Stormwater Code of Practice if within the 1% AEP floodplain and that any changes to the floodplain does not increase adverse effects or increased flood depths or velocities to other properties upstream or downstream of the site.</li> <li>Ensure identified overland flow paths remain unobstructed and able to safely convey runoff.</li> </ul> | <ul style="list-style-type: none"> <li>Green outlets to be used where possible, subject to specific site constraints.</li> <li>Staggered outlets to the watercourses / communal basins / wetlands as per sub-catchment requirements.</li> </ul> | <ul style="list-style-type: none"> <li>Public infrastructure located within public areas including roads and reserves.</li> <li>Assets subject to detailed design during the subdivision consent and EPA stages.</li> </ul> | <ul style="list-style-type: none"> <li>Remove or modify artificial fish passage barriers where possible to improve the ability of migrant fish species to access upstream habitat.</li> </ul> |
| Catchment B                     | <ul style="list-style-type: none"> <li>Residential – mixed house urban</li> <li>Residential – mixed house suburban</li> </ul>                                                                                                        |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                                                                                                                                                                               |
| Catchment C                     | <ul style="list-style-type: none"> <li>Residential – mixed house urban</li> <li>Business – Mixed Use</li> </ul>                                                                                                                      |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                                                                                                                                                                               |
| Catchment D                     | <ul style="list-style-type: none"> <li>Open Space – Conservation</li> <li>Residential – mixed house suburban</li> </ul>                                                                                                              |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                                                                                                                                                                               |
| Catchment E                     | <ul style="list-style-type: none"> <li>Business – Local Centre</li> <li>Residential – mixed house urban</li> <li>Residential – mixed house suburban</li> <li>Open Space – Conservation</li> <li>Business – Light industry</li> </ul> |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                                                                                                                                                                               |
| Catchment F                     | <ul style="list-style-type: none"> <li>Business – Light Industry</li> <li>Business – Mixed Use</li> </ul>                                                                                                                            | Stubbs Stream / Mahurangi River    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                                                                                                                                                                               |
| Catchment G                     | <ul style="list-style-type: none"> <li>Residential – Single house</li> </ul>                                                                                                                                                         | Below Falls Road                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                                                                                                                                                                               |
| Catchment H                     | <ul style="list-style-type: none"> <li>Residential – Single house</li> </ul>                                                                                                                                                         | SEA - Terrestrial                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                                                                                                                                                                               |

# Site area



# Development plans

