

# St Lukes Environmental Protection Society Inc (STEPS)

## STEPS Submission to Albert Eden Local Board (AELB) Plan 2017

Submitters: STEPS

### Objectives:

1. AELB is asked to:
  - strengthen focus on “Respect and Protect our Environment” by identifying other natural taonga and developing a restoration strategy for aquifer, wetlands and creeks
  - improve public access to, and visibility/ appreciation of taonga; also protection
  - ensure enhancement, protection and access is guided by a Strategic plan and vision.We believe that one key will be to work more closely with other Local Boards, especially: Waitemata and Puketepapa to achieve the above.
2. AELB is requested to advocate strongly to the AC Governing Body to achieve:
  - Ringfenced **stormwater** budget over 30 years to enable:
    - Renewal of the stormwater capacity of Albert Eden
    - Growth under the Unitary Plan:
      - designated 62.5% impervious area in Meola Catchment means **increases of more than 2 sq kilometers** and millions of cubic meters of stormwater each year.
      - Oakley Creek is also planned to increase by over 2 sq kilometers impervious surface, with additional millions of cubic meters of stormwater.

### Key Points

STEPS thanks AELB for this opportunity to input to the Local Board Plan

#### Albert Eden Environment

STEPS supports Outcome 7 “Respect and Protect our Environment”.

We note and support the Opportunities identified, and would ask that the **Three Kings-Meola-Western Springs Aquifer** be added as a taonga to be recognized and cherished. Auckland Council’s largest aquifer<sup>1</sup> underlies Albert Eden Local Board Area.

STEPS and other community groups are concerned at the potential for any **contamination of the Western Springs-Meola-Three Kings aquifer** and STEPS believes that protection of the aquifer should be a key community objective.

We believe that a **strategy** is needed to guide the protection and enhancement of both Auckland’s largest aquifer, and Meola Creek – the largest catchment on the Auckland isthmus. We ask AELB to work with the Puketāpapa and Waitemata local boards to develop a joint approach to managing and protecting Waitiko Meola Creek and underlying aquifer. Te Tokaroa Meola Reef, Western Springs and the underground water at Three Kings all form a part of this same landform, along with Motions Creek (see background and Appendix below).

The strategy would include restoration of the creek, protection of the aquifer, and enhancement of the lava rock forest as taonga, with more opportunities for the community to learn about and cherish them. It would also include mangrove forest (at Te Tokaroa). The work that AELB is planning in Chamberlain park – both on creek and wetlands, would be an essential part of this wider strategy.

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<sup>1</sup><http://unitaryplan.aucklandcouncil.govt.nz/Images/Auckland%20Unitary%20Plan%20Operative/Chapter%20M%20Appendices/Appendix%203%20Aquifer%20water%20availabilities%20and%20levels.pdf>

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STEPS has a vision of a mountain to sea walkway from Mt Albert to Meola Reef for the whole community to enjoy. We ask that AELB adopt a 'Green Fingers' vision for Meola Creek, and to Sponsor the Waititiko-Meola Creek mountain to sea walkway in conjunction with the other boards and STEPS. We note that AELB already has plans for part of this walkway through Chamberlain park, which STEPS supports.

We note our disappointment at the omission of Waititiko in the online and printed versions of AELB's 2017 plan and trust this will be corrected. In this light we seek a meeting with AELB to plan future Meola planting areas for funding.

### Stormwater Renewal

The Appendix shows that Albert-Eden's largest catchment has significantly greater sewage overflows than other creeks in Auckland and in NZ. The catchment map shows large areas of 'combined sewers' containing stormwater and sewage; large areas of 'soakage' (not effective as impermeable surface increase, and pollutants are a threat to the aquifer); and very few stormwater pipes. Photos of sewage, excrement and detritus in Kerr Taylor Park are not attached, but are available, since the manholes blow every time there is intense rainstorm over a few hours. In the Appendix is a man washing his dog in raw sewage during such an overflow event in March 2017.

A widely held misconception is that Watercare's Central Interceptor (CI) project will resolve Meola catchment's overflows, and it is acknowledged that it will certainly make a difference. We wish to inform AELB of the following:

- Under the CI Watercare now commit to reduction of overflows by 80% - which is not enough
- Watercare's CEO below has served notice to Auckland Council in their AMP that CI will only provide capacity for Meola stormwater on an **interim** basis (see Background below), making **the construction of stormwater renewals in Meola catchment by Auckland Council** (Healthy Waters) urgent given the lead times involved
- **Neither the Long Term Plan nor the Stormwater Asset Management plan contain any visible stormwater infrastructure on Meola.**

This is hard to believe when we realise that the Unitary plan projects a 27% increase in impervious surface area in Meola catchment (see stormwater volumes in Background below).

Whether it is looked at from either a **renewals** basis, or from a **growth** perspective, AC must put in place upgraded stormwater to justify the rates they are collecting in Albert Eden. We cannot continue to walk in raw sewage throughout the 21<sup>st</sup> century. Auckland's housing problem cannot be solved while ignoring the stormwater infrastructure deficit.

We support wetlands as a desirable approach to stormwater reduction, and on this basis request the local board to put aside 2 hectares in Chamberlain park, in recognition of the huge planned increase in stormwater volumes which Auckland Council intends to route into Meola catchment (see Background below). This wetland should form a part of the Meola Strategy referred to above, and provides both aesthetic and functional improvements with huge potential amenity value.

This requires stormwater budget over 30+ years to enable:

- **Renewal** of the stormwater capacity of Albert Eden "Combined" sewers (owned by Watercare)
- **Renewal** of the 'soakage system' for stormwater which no longer functions well across Albert Eden, and represents an even greater threat of aquifer pollution since the Unitary Plan designates 62.5% impervious area in Meola Catchment, an increase of 27.5% over the current impervious area.

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Auckland Council needs a strategic and long term view of how stormwater will be managed in conjunction with Watercare's sewerage plans in Albert Eden. This will need community engagement by **Healthy Waters** – particularly with community groups in the isthmus areas with combined sewers and inefficient 'soakage' solutions from previous centuries. [See background below; this is not a Watercare issue].

Auckland Transport roads are responsible for half (48%) of our stormwater: we request AELB to lobby them to ensure they will use porous concrete or gobi blocks rather than impervious surface materials as their default going forward.

### Specific Recommendations for AELB Plan 2017:

- 1) P 27 Add an Opportunity under Outcome 7 - Environment:
  - AELB to work with Puketepapa and Waitemata Local Boards to enhance Western Springs-Meola-Three Kings Aquifer and recognise it as an Auckland taonga, along with Te Tokaroa, Meola Reef.
- 2) Add 1 challenge p 28
  - Albert Eden has the least green space per head of population in Auckland, well below the average for Auckland or NZ.

Rework another challenge:

  - Albert Eden has a **lack of stormwater infrastructure** which contributes to our waterways flooding with sewage and other pollution which flows into our harbours.
- 3) Initiatives: p28
  - 1 We support the initiative "continue to support restoration..." in its entirety, and seek assurance that STEPS' projects for restoration of Meola Creek are included here.
  - 2 Add an initiative
    - AELB to Sponsor the Waititiko- Meola Creek Restoration Strategy and Action plan in conjunction with the other boards and STEPS. AELB intends to give safe access to our creeks to the public through initiatives such as Chamberlain park / Meola Creek walkways.
  - 3 Enhance an initiative:
    - *Work with the Puketāpapa, Whau and Waitemata local boards to develop a joint approach to managing and protecting Te Auaunga-Oakley Creek, **Waitiko Meola Creek and Auckland Council's largest aquifer.***
  - 4 Correct the initiative to read
    - "Advocate to ~~Watercare~~ **AC Healthy Waters** for stormwater infrastructure to help reduce pollution of our aquifer, harbours and waterways". Expand it to capture the need for
      - A strategic approach to stormwater as part of "3 Waters"
      - Gaining commitment of stormwater funding for the Meola catchment and throughout Albert Eden
      - Engage STEPS and other groups who are affected by stormwater in both the annual plan and the strategic review of Stormwater. Please include STEPS in your consultation process.
- 4) Reword the last initiative under Outcome 5 (Travelling...) p 24:

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- Continue to Advocate to Auckland Transport for high quality design and maintenance of roads, footpaths, lighting and **stormwater infrastructure using using AC's water sensitive design principles<sup>2</sup> and porous surfaces as their default.**
- 5) Finally We ask AELB to submit to the Auckland Plan to ensure a Chapter on Water is included, as the basis for funding capital expenditure for Albert Eden Stormwater over the next ten years.
  - o Water means Sewage, Stormwater, Drinking Water, and all the interconnected sources, infrastructure and receiving environments for water which need construction or maintenance by Auckland Council as it contributes to the health of its population
  - o Water means harbours, rivers, beaches aquifers, springs and other natural water features which are under the protection of Auckland Council

### Background:

- The Western Springs-Meola-Three Kings Aquifer is an extensive (approx 25 sq km) volcanic aquifer, up to 50 meters thick.<sup>3</sup> We understand that the existing water is of high quality and that it has been identified as a future source of potable water. It has water availability of 9.6 million cubic meters per year and it is the largest aquifer under the protection of the Auckland Council.<sup>4</sup> We ask AELB should work with Puketepapa and Waitemata Local Boards to enhance this asset and treat it as an Auckland taonga, just like Motu Manawa Marine Reserve.
  - o We note that last week, the Environment Minister accepted an application for a Water Conservation Order (WCO) for the coldwater springs in Golden Bay — and for the Arthur Marble aquifer that feeds them
- Meola Creek and Motions Creek are inter-related stream systems, connected via Western Springs lake (where the aquifer surfaces). Motions Creek emerges on the East of Meola Reef. Baseflow in the lower reaches of Motions creek comes from the Western Springs Lake
- Meola Creek, along with Maungawhau, Almorah, and Gribblehirst Park form much of the 1% remaining of Auckland's rare lava rock forest. Albert Eden has a unique natural feature. (See NZ Geographic story <https://www.nzgeo.com/stories/eden-in-auckland/>)
- As the largest catchment on the Auckland isthmus, Meola Creek also suffers from being the conduit for the highest amount of combined storm water overflows and raw sewage of any creek into the Waitemata Harbour (Watercare advised STEPS of estimated overflows of 1,325,000m<sup>3</sup> (735 Olympic Swimming Pools)). The most degraded portion in the upper catchment is near Roy Clements Treeway just behind Mt Albert Grammar School where Watercare Services' overflows occur at both Lyon Ave and nearby Haverstock Rd. This creek has very low base flows, especially in summer. However as noted above the lower part of the creek is regarded as having higher ecological value because it is spring fed, diluting the stormwater. (See NZ Geographic story <https://www.nzgeo.com/stories/no-swimming/> )
- Unitary Plan Context/ Stormwater volumes:

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<sup>2</sup> <http://www.aucklanddesignmanual.co.nz/project-type/infrastructure/technical-guidance/wsd>

<sup>3</sup> TP 171 - Auckland Water Quantity Statement 2002 part 3

<http://www.aucklandcity.govt.nz/council/documents/technicalpublications/TP%20171%20-%20Auckland%20Water%20Quantity%20Statement%202002%20part%203.pdf>

<sup>4</sup> Nov 2016 Auckland Unitary plan

<http://unitaryplan.aucklandcouncil.govt.nz/Images/Auckland%20Unitary%20Plan%20Operative/Chapter%20M%20Appendices/Appendix%203%20Aquifer%20water%20availabilities%20and%20levels.pdf>

<http://www.meolacreek.org.nz/>

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- Auckland Unitary Plan (AUP) is driving an urban area increase from 42 % to 62 % imperviousness<sup>5</sup> across the isthmus
  - Climate change will produce more frequent extreme events causing more flood damage
  - Every millimetre of rain falling on a square meter of impermeable surface produces one litre of stormwater runoff<sup>6</sup>
  - Meola Creek has an impervious area of approximately 8 sq km or 49% and AC informed us it will increase under the AUP to 62.5% (an additional 2.2 sq km).
  - Oakley Creek has an impervious area of approximately 5.2 sq km (43%) which is planned to increase by 2.1 sq km (60%).
  - Under AUP, there will be an additional 5,614,050 cu m per year (2245 OSPs) of stormwater extra storm water for Oakley and Meola catchments combined, some portion of which would reach the creeks.
- The Foreword by the Chief Executive of Watercare Services in the Watercare Asset Management Plan 2016 to 2036 p3 is evidence of a disconnect between Watercare and Auckland Council  
*“Watercare’s proposed Central Interceptor is being provided to enable growth in the central and southern areas of Auckland and **also provides an interim solution to stormwater issues**, providing time for Auckland Council to construct adequate stormwater infrastructure to service the area. Continued reliance on the wastewater system for the collection and treatment of stormwater is not sustainable for a growing and liveable city”<sup>7</sup>.*
  - STEPS questions whether one driver for this statement is that the upgrade of Mangere processing plant will be required earlier if a sewage processing plant is required to also process stormwater, and that gaining resource consent may be difficult.
  - Healthy Waters state: About 60% of the [stormwater] pipes were installed in the last 35 years. The oldest pipes, installed before 1940, are found in CBD, **Motions, Meola**, Grey Lynn, Epsom, Newmarket, Onehunga and the Eastern Bays Catchments<sup>8</sup>.
    - STEPS takes from this the implication that there is budget available for renewal of stormwater assets in the above catchments.
  - 48% of stormwater comes from roads. It is unclear what standards AT work to in terms of usage of permeable concrete and related technologies to reduce the amount of stormwater runoff from roads.

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<sup>5</sup> 2015-35 long term plan

<sup>6</sup> Auckland City Drainage System Resource Consents Assessment of Environmental Effects (2001) [ACDSRC AEE] P37

<sup>7</sup> <https://www.watercare.co.nz/SiteCollectionDocuments/AllPDFs/Watercare-Asset-Management-Plan-2016-2036.pdf> ]

<sup>8</sup> STORMWATER ASSET MANAGEMENT PLAN 2015-2045 p80

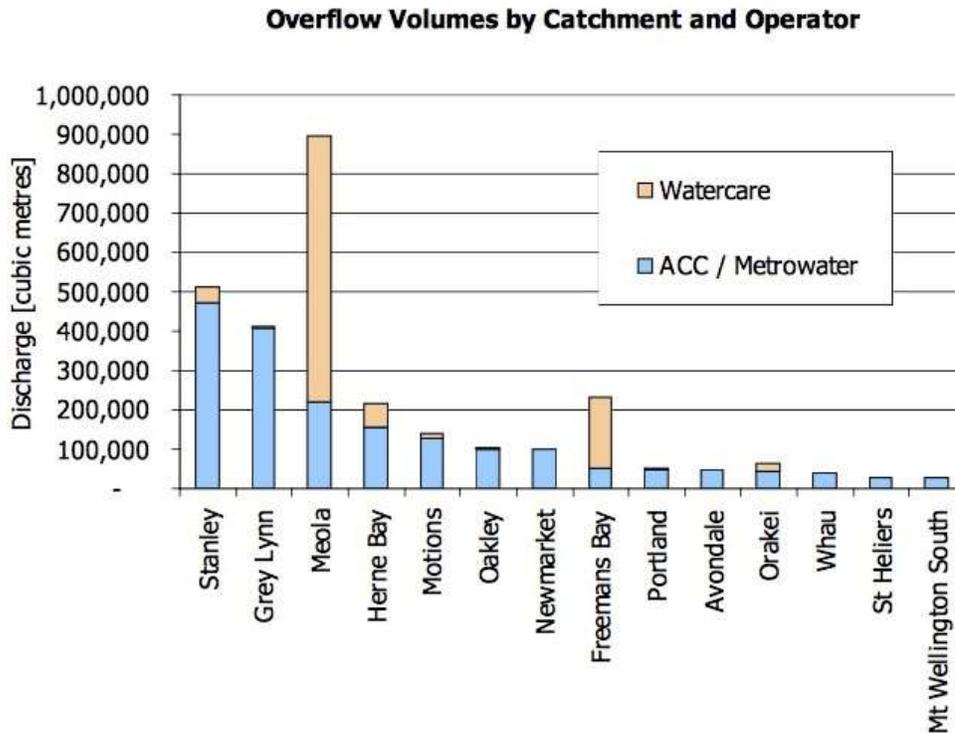
<http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/Councilstrategies/Documents/stormwaterassetmplan.pdf>

<http://www.meolacreek.org.nz/>

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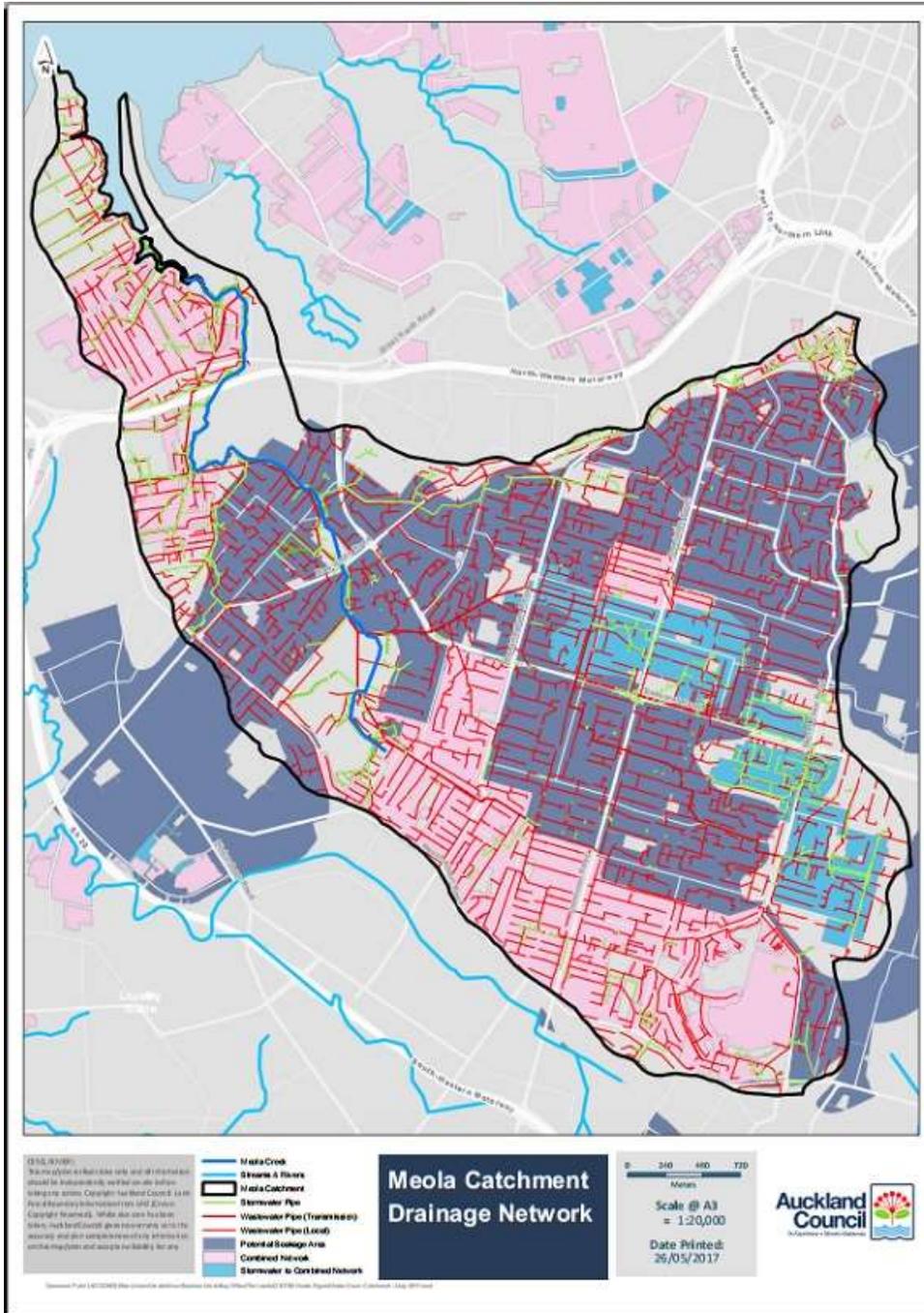
## Appendix

### Catchment Overflows at 2010, Auckland Council inauguration



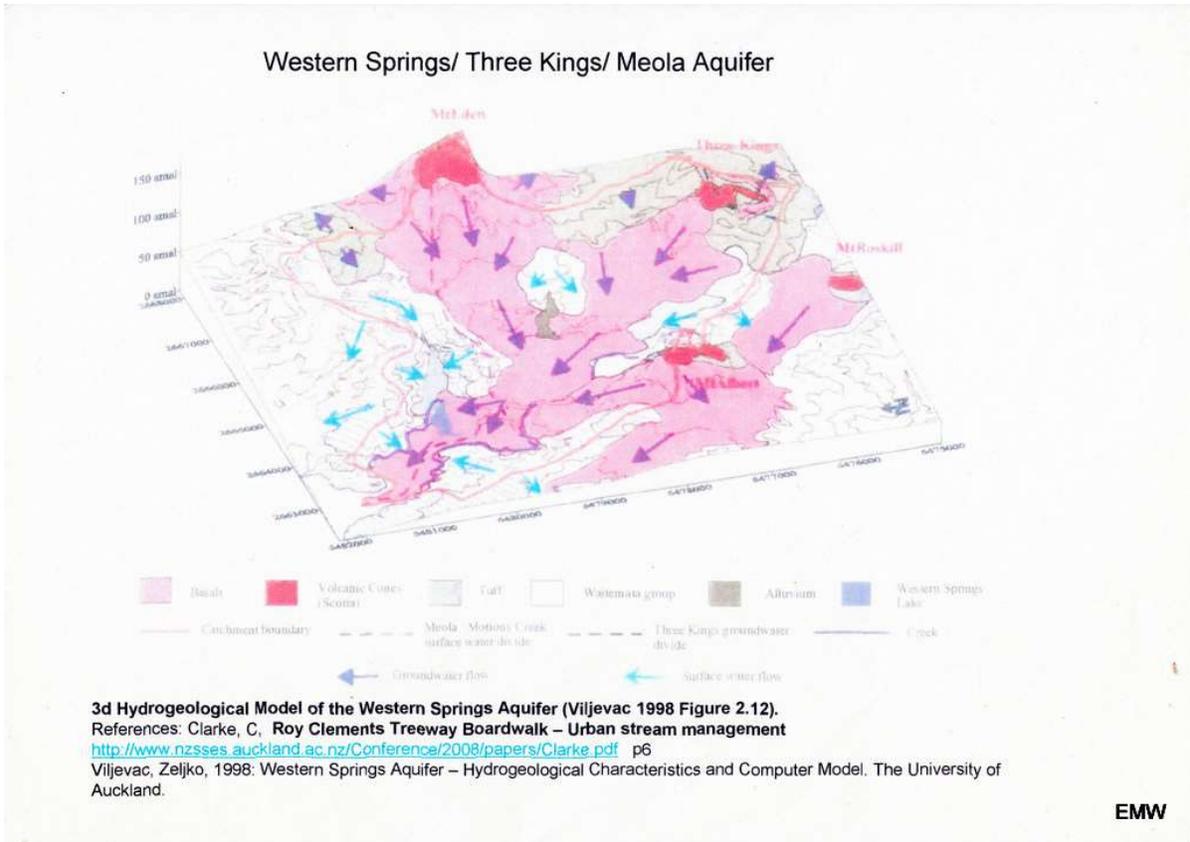
*“A catchment with 35-50% increase in impervious area will experience a three-fold increase in stormwater runoff; and a 75%+ area, a fivefold increase in stormwater<sup>9</sup>”*

<sup>9</sup> Auckland Council Water Sensitive Design for Stormwater March 2015 Guideline Document 2015/004  
<http://content.aucklanddesignmanual.co.nz/project-type/infrastructure/technical-guidance/Documents/20032015%20GD04%20WSD%20Guideline%20Document.pdf>  
<http://www.meolacreek.org.nz/>



twr/Modelling Office/Tim Lockier/201705 Meola Figure/Meola Creek Catchment - May 2017.mxd

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Meola Aquifer – clear spring water at STEPS wetland May 2017

