

St Lukes Environmental Protection Society Incorporated

(STEPS)

Submission to Auckland City Council in relation to Private Plan Change 8 – Westfield St Lukes

Submission by St Lukes Environmental Protection Society (STEPS)
c/- Pat Prescott and Elizabeth Walker
33 Fergusson Ave,
Mt Albert 1025.

STEPS opposes all of the plan change for the reasons outlined below

The reasons for our opposition of the plan modification are:

1. We believe that there is inadequate provision or recognition by the applicant in the plan change or the background information of the need to enhance the Natural Resources in the local area that are highly likely to be impacted by the redevelopment and intensification proposed. In particular we think that there should be better recognition of :
 - a) Gribblehurst Park is an area of special ecological significance to Auckland City and to New Zealand. It is the last remnant of 'cabbage tree swamp'. Any company who wishes to encroach / exploit or utilize this special resource – must expect to pay their full development contributions. The current "rat run" for traffic from Sandringham Road to St Lukes and Morningside Drive will be exacerbated by this proposal and this will have a detrimental effect on Gribblehurst Park
 - b) Meola Creek is one of only 5 publicly owned creeks in Auckland City. It also must be enhanced, not damaged by large scale development.

We look forward to proposals from Westfield as to how they plan to work with the community in enhancing and preserving these special areas, and how they will use Low Impact Design (LID) Principles in their designs – to acknowledge that they are in a very fragile ecological area, and to act responsibly toward community and environment.

We believe that there is inadequate provision or recognition by the applicant in the plan change or the background information of the need to better manage the impact of the proposal on waste water infrastructure. Upper Meola Creek frequently floods, and is overloaded with both storm water and raw sewage. St Lukes Mall is less than 200 metres from Meola Creek, Lyon Ave (refer Appendix aerial map). Auckland City Council should not issue consent for the rezoning of land in this area to provide for large scale and high intensity developments such as this, in an area where their own reports frequently point out the lack of capacity of the storm water and waste water infrastructure. We have appended more information to provide context for this submission

1.1 We do not accept Watercare Services statements about adequate capacity in the area - when we all know that waste water and stormwater already overflow here many times a year prior to a proposed 5 or 10 fold increase from St Lukes. The change from Business 4 and Residential 6a to Business 8 and the nature of the development proposed in the concept plan for the Business 8 zoned land will increase the problems of peak flows as noted by McQuillan in 2004.(See Appendix 4 E)

1.2 Most New Zealanders will find it hard to understand that NZ's largest city accepts a situation where raw sewage frequently flows through public parks and school grounds, and heavy metal pollutants pour into Waitemata Harbour beside heritage protected Te Tokaroa/ Meola Reef. It is hard to understand how Westfield and Auckland City Council have worked for several years to develop a proposal which ignores the unacceptable reality of these overflows through the heart of the western suburbs.

1.3 Rezoning and redevelopment of this site should not be permitted until ARC, Auckland City and Watercare Services upgrade the Watercare Interceptor to stop these overflows, and to separate the combined sewers in Meola Catchment, especially those upstream from Haverstock Rd and Lyon Ave. Typically the Watercare Services Edendale branch sewer overflows at Lyon Ave, and at Haverstock, pouring a torrent of stormwater (including pollutants and sewage from combined sewers) into Meola Creek, and over the grounds of adjacent schools. [See photos of flooding and number of events in Appendix 4B]

As noted below in the Meola ICS report, the Level of service of Meola combined sewer/ stormwater is well below design standards of Auckland City and Metrowater – 50% cannot handle 1 in 3 year storm flow. The largest overflow in the Meola catchment is in the upper catchment at 96 Haverstock Rd. Indeed it is the largest overflow site in Watercare Services' entire combined sewer network, followed by Lyon Ave where St Lukes discharges, which is approximately 500 m further north. See Appendix 4B.

Meola Catchment gets 2 full Olympic pools per day of waste and sewer overflows (average) – half of this is above Lyon Ave interceptor – from Watercare Services 'wholesale' sewerage and waste water infrastructure in Haverstock Rd. The north east corner of MAGS grounds (behind Megacentre and St Lukes Garden Apartments) has frequent floods where the two overflows ("96 Haverstock Rd" and "Lyon Ave") combine. When the tide is in at the same time it all backs up and there is serious flooding. [The overflows are listed on p7 – total 1.5 mill cu m per year; 0.722 million cu m (47%) of which issue from Watercare Services at 96 **Haverstock** Rd during 227 large overflows in a year, while 14% issue from Lyon Ave during 80 large overflows in a year. Analysis suggests that each large overflow event is 1-2 Olympic pools of sewage and stormwater. (See Appendix 4B)]

1.4 One major cause of increased overflows and flooding is impermeable surfaces – such as concrete from large developments – replacing the highly permeable volcanic lava, and soil of St Lukes area. Historically everyone in the area had 600 Sq m sections and the area was residential. Large back lawns absorbed the water and it filtered through to the underlying aquifer. Stormwater systems were not needed. Later – stormwater and sewage were collected in the same pipes in some areas (see Appendix 4H) and called "combined sewers". Also since this time many sections have been subdivided and the permeable surface area reduced.

1.5 Another major factor which led to more frequent flooding is that large cycle developments (such as St Lukes) and also large high intensity residential developments have covered many square kilometers of this fragile area with concrete. This causes more stormwater to be channeled – and more stormwater overflows to occur. The stormwater contains zinc from unpainted roofs (see Roofing Materials Survey by Bruce Wallace and Partners referenced in Appendix 3), and also car generated pollutants (such as rubber, oil, etc) from concrete and road surfaces. Add to this the sewage from combined sewers south of Haverstock Rd – and this is what flows many times each year, along Meola creek and into Waitemata Harbour.

Meanwhile the authorities – Auckland City and Watercare Services – have NOT upgraded either stormwater or the sewerage infrastructure to support the amount of development their planning department authorized. The existing sewerage and stormwater drains cannot cope.

1.6 Meola Creek is already overallocated. Westfield St Lukes cannot provide any more waste water or sewage flows – and in fact should reduce them significantly. How can approval be granted for them to discharge five to ten times what they already discharge into a sewerage and stormwater system which is already seriously short of capacity?

By contrast, the Westfield stormwater plan states there is adequate capacity in the sewer. **Which sewer?** We understand the Lyon Ave interceptor takes existing flows from St Lukes– and frequently floods already. And it appears that the calculations in Tonkin and Taylor report were for a 1 in 10 year event. ADSRC report predicts increases in peak flows in Auckland (see Appendix 3). We would ask to see the modelling take this into account.

Watercare services know that the sewerage and waste water infrastructure is overloaded. We believe that Watercare Services must upgrade the ‘wholesale’ sewerage and waste water infrastructure and stop the regular overflows in Meola Creek before Auckland City approves any large scale Private Plan changes (such as Westfield St Lukes) in this catchment, or grants resource consents which cannot be accommodated in the existing infrastructure.

1.7 Further, Auckland City appears to have taken little action, in response to Westfield’s own reports which states: "existing northern carpark was constructed in 2003 and appears to have inadequate stormwater disposal capacity." (Please Refer:

- Annexure 10 of the application - Report prepared for Westfield NZ Ltd by Tonkin and Taylor Ltd 18 November 2008
- Appendix 4J - Response from Auckland City Council regarding Westfield St Lukes Inadequate Stormwater Capacity)

1.8 We submit that proposed changes by the company will have a detrimental impact on the already fragile nature of the upper reaches of the Meola Creek, and on Waitemata Harbour. In particular, reduction in permeable areas (both landscaped and unbuilt areas); and the addition of more households adjacent to the creek will have an impact on Meola Creek, Meola Reef and Waitemata Harbour.

The impacts would come from:

- a) A five fold increase in sewage from the occupants of new residential units near to the creek, placing further pressure on the outdated sewerage system, and discharging additional raw sewage into Meola Creek in overflow situations.
- b) A 10 fold increase in stormwater runoff because of reduced permeable surface would again increasing the volume of waste water and surface contaminants into Meola Creek during increasingly frequent overflow situations, as well as preventing natural aquifer recharge.

Given the publicly acknowledged inadequacies of the waste water and sewerage infrastructure in St Lukes and Meola Creek (as outlined above), we ask ACC to decline this application as we do not believe it is acceptable to pour more sewage, foul water and stormwater into Meola Creek as a direct result of development. We request that the marginal impacts of any increase in the number of residences and any reduction in permeable surfaces be realistically assessed.

We believe that there is inadequate provision or recognition by the applicant in the plan change or the background information of the need to better manage water retention and aquifer recharge. A major problem of Meola Creek is LOW base flow. A contributing factor is because impermeable surface prevents natural aquifer recharge. We want to see some innovative designs from St Lukes – as to how their water retention will filter clean water through to recharge the aquifer. Detaining the water in plastic tanks and slowing its release is not enough. It needs to be retained and used on site, to recharge the aquifer and to enhance St Lukes landscape – not pour out to sea.

2. STEPS opposes any reduction in the current level of landscaped area; or unbuilt area on the land affected by the proposal unless Low Impact Design approach can be demonstrated. Our grounds relate to the clear environmental impacts shown in Auckland City's and other reports, of the ongoing reduction in permeable surface in the St Lukes and Upper Meola Catchment areas. These impacts are on marine life and the environmental values of Meola Estuary/ Waitemata Harbour. While it might be good urban design to build from frontage to frontage, we also need to be sure that Westfield has incorporated Low Impact Design principles, as an alternative to mitigating the negative environmental outcome that otherwise will inevitably result. (http://www.arc.govt.nz/auckland/low-impact-design/low-impact-design_home.cfm and <http://cs.synergine.com/> has some successful case studies.)
3. STEPS opposes the building heights proposed in B2. Maximum Height. Development should be kept to existing heights. This is not downtown Auckland or Newmarket. Provision for the level of development in B.2 as well as the lift shaft overruns and other elements that are normally exempt from maximum height is inappropriate.

Of particular concern is the fact that the 40 metre max height above datum proposed for Height Area A , 20 metres for Area 1 and the 30 metres for Area 3 and the absence of any building set back would appear to be in conflict with the volcanic cone view of Mt Albert that starts at Exeter intersection A10. This does not appear to have been assessed in the Visual assessment that accompanies the application – why does the St Lukes Concept plan not utilise this view on its door step?

We believe that the development and associated lighting etc above the existing heights need to be controlled. There is no limit on the hours of operation of the facility in the concept

plan and we do not accept the kind of light pollution that is evident from a structure of a similar (perhaps larger scale) than is proposed for Eden Park.

4. STEPS is opposed to the provision D9 Exterior Signs - it is inappropriate to deal with signs as part of the plan change and make a distinction for St Lukes – signs should continue to be managed through the bylaw.
5. STEPS is disappointed to see the approach taken to Transport in the plan change and requests the Council to take a more strategic view when considering the application. Where is the innovation and multi modal approach to transport in the actual plan change provisions? While Bus Transfer Station is a permitted activity in Area A where is the requirement that the bus transfer station will be built? Sylvia Park has shown a successful model for this and STEPS would like to see a similar approach taken with a cap on development until the bus transfer station and other transport options to reduce reliance on private motor vehicles are provided by Westfield as 'financial contributions'. Where is the transport to the Morningside railway station? And what about enhanced bus connections to Britomart and other parts of the city – especially out of peak hours?
6. STEPS is also concerned about the Impact on Public Health as there is already a documented public health issue with high bacterial counts in the grounds of MAGS due to storm water inadequacies (as specified above from the ICS report). We note that Watercare Services have advised that the existing Edendale Branch sewer has adequate capacity to receive the additional waste water but this not a static situation. Council is permitting other development and we believe that no additional stormwater would be permitted to discharge into the sewer

There are similar public health impacts in Meola estuary at Te Tokaroa. Additional raw sewage, and runoff from developments in the area around St Lukes may be difficult to measure, but it certainly has a marginal effect to worsen a public health situation which is already unacceptable, though not well known.

7. STEPS is also concerned about the Impact on Water Quality
STEPS submissions (on water quality and Meola Creek overflows) relating to various developments adjacent to the creek have typically been ignored by RMA Commissioners, who accept Watercare Services and Metrowater advice that the pipe to remove waste water off site has sufficient capacity. Metrowater and Watercare Services, in turn do not appear to take note of official reports which state that existing frequent large overflows from Watercare Services at Lyon Ave and 96 Haverstock Rd, directly into Meola Creek are not acceptable. STEPS finds it very difficult to understand why submissions - stating that further intensification, more sewage, more stormwater, and increased impermeable area will only harm the Auckland environment, causing degradation of water quality, and increased public health risks - are overlooked by Auckland City Commissioners. Our conclusion is that for some reason Auckland City RMA Commissioners do not believe that water quality is within their brief. STEPS believes that this approach does not conform with the spirit of the RMA. It is possible that it also does not meet the legal requirements of the RMA either.
8. Library
STEPS requests more detail on plans for the library – is there any intention that it be moved? If so - what do the people of Auckland and residents of St Lukes gain from this?

9. Timing

We question whether the timing of this application has been influenced by current discussions regarding removal of the ability of owners to carry out Private Plan changes. At a time when there are huge changes in both Auckland governance and the RMA itself, we request our local authorities to not be rushed into a decision when perhaps investigation of impacts has not yet been completed.

If the council is of a mind to approve the plan change application then we would like to see the following changes:

- a) We do not agree with the approach taken in the plan change (Restricted Discretionary Activities D3. New Buildings and additions and alterations to existing buildings 3.1 General Criteria for Building Design) to restrict the matters that any new buildings are assessed against to matters only related to design and appearance as proposed in the plan change. We believe that any new building should also be assessed in relation to the ability of the infrastructure in the area to cope with the additional load placed on it by the building, any parking and building occupiers at peak periods of use and in times when the local infrastructure is at capacity.
- b) We believe that a development of this scale should be more self sufficient. More effort should be made to be more sustainable and that approaches developed to reduce flows, retain and harvest storm water using LID, and to more sustainably deal with the consumption of water and emission of wastewater before it leaves the site.
- c) We support the provision of high density residential development but only if the whole development is required to be more sustainable, and the infrastructure (Storm water and waste water) in the local area has been upgraded. However that capacity will be 'finite' and Westfield will be competing with other activities to take up that capacity - we believe each new development and any increase in floor area should be assessed even if the zoning is changed. We believe Westfield is constantly looking at ways to increase numbers (shoppers and other users) and this will mean that their 'allocation' of infrastructure capacity needs to be able to be adjusted in step with the uptake by others in the area.
- d) We are concerned that the existing northern carpark constructed in 2003 .appears to have inadequate stormwater disposal capacity as of now. This means the existing development does not meet council standards ie. it is producing excess runoff and we would not like this situation to continue, or any new parking areas to also create similar runoff. We are alarmed with the prospect of any excess storm water from the site being directed on to adjacent road reserves and then being able to continue along the natural course downstream of the shopping centre [i.e. into Meola Creek at Lyon Ave]. We believe that on site storm water management techniques should be required. These techniques should be such that they have aesthetic and amenity value for shoppers and residents, and that they improve the environment.
- e) In relation to C2. Financial Contributions/ Development Contributions we are opposed to any confidential discussions as normally occurs in relation to a Private

Development Agreement. We believe that the contribution from Westfield to the cost of off-site works should be part of the public realm and if the zoning is approved the quantum of the financial contributions and/ development contributions should be specified in the plan change and therefore subject to appeal or alternately reflect without change the relevant contribution requirements of the Council's Development Contribution policy that applies at the time of the development.

If the council decides to specify the contributions levels in the concept plan (which is our preference) then we believe the contributions should be in relation to:

- Enhancement of Gribblehurst Park
 - Enhancement of Meola Creek
 - Upgrade of the Watercare Interceptor; and that there should be a cap on further development until this upgrade occurs
 - A requirement that a bus transfer station will be built as per the Sylvia Park model with a cap on development until this facility is built.
- f) We recommend a condition be applied regarding selection and treatment of all roofing and drainage materials, so that roofing materials do not result in pollutants being added into stormwater.
- g) We also recommend that Westfield St Lukes be required to demonstrate incorporation of low impact design principles in their designs, and recommend that they work with ARC and appropriate local authorities to achieve this.
- h) B2. Maximum Height. Development should be kept to the height currently in the district plan for the site

We ask that the Council decline the private plan change request for the reasons outlined above . If the Council chooses to grant the request we ask that the plan change is amended in the manner specified in our submission.

We wish to be heard at the public council plan modification hearing.

Elizabeth Walker
STEPS

----- Date 29 May 2009

St Lukes Environmental Protection Society Incorporated

(STEPS)

Background

Situation – Meola Creek Upper Catchment

Meola Creek originates at the foot of Owairaka/ Mt Albert, and is fed by natural springs from the large aquifers which underly the Mt Albert/ Sandringham/ St Lukes/ Three Kings area. It flows from Haverstock Rd Mt Albert to the Waitemata harbour outlet at Meola Rd, Pt Chevalier, a distance of about 6km. 79% of its length is bounded by reserves.

Meola Catchment is bounded by Mt Eden Rd to the east, Mt Albert Rd to the Southwest, Carrington Rd to the west, and New North Rd to the northeast. The catchment has an area of 1576 ha and makes up about 10% of the surface area of Auckland isthmus. It is the largest single catchment in Auckland City. [Refer Integrated Catchment Study Stage 1D Water Quality Monitoring Report (Area 1) (Auckland City, Metrowater, 2004) pp2-3].

Meola Creek is owned by Auckland City Council and managed by Metrowater. The Springs which form the source of the Meola Creek are on DOC and Plant and Food land on the lower slopes of Mt Albert. [Refer to Appendix 4 I1 Upper Meola Creek Survey Map 1842].

The State of Meola Creek - 2009

Within the living memories of STEPS members Meola creek has contained fresh watercress which local people gathered and ate. Meola Creek was where local mothers took their children down to collect tadpoles less than 30 years ago. (See Appendix 1 for an outline of STEPS goals and activities).

There are many Auckland City (ACC) reports documenting the stream's decline over several decades, and many reports which promise that within 10 years the sewers will be separated; or the sewerage infrastructure will be fixed. To our knowledge no funded plan to relieve or improve the overflow situation is in place. (See Appendix 4F and 4G for some of these reports). We fail to understand why developers and ACC would continue developing in the vicinity of Meola creek without taking this fact into account.

Further we believe that any large scale change such as Westfield St Lukes is proposing in the Upper Meola Catchment, represents an opportunity to enhance the health and value of both Meola Creek and the underlying aquifer. The existing Roy Clements Treeway represents a very fine example of forward thinking by Mt Albert Grammar School or MAGS, with the support of Auckland City, Metrowater, and STEPS.

STEPS invites developers in this area to follow this example by contributing to the prevention or remediation of damage to this creek. Low Impact Design Principles are advocated by ARC and supported by STEPS. In addition STEPS has published the outline

of a program of projects to improve Meola Creek. We would be happy to discuss these with Westfield St Lukes and we invite their involvement and support.

<http://www.meolacreek.org.nz/2009/04/09/meola-creek-restoration-projects/>

While the existing situation is rooted in the historical combined sewer, Auckland City has had many years to start to reverse the situation. Public and private developments represent another contribution to the ever growing tide of sewage and runoff that is pouring down Meola Creek. It is time to stop additional development on the creek, and start to take care of it. We look to Auckland City Council and Watercare Services to provide some real financial and moral leadership for the benefit of existing and future local residents, Meola creek, Meola Reef, and the wider Meola Catchment.

This means funding sewer separation projects and upgrading the capacity of the Watercare Services sewerage infrastructure BEFORE undertaking large scale developments such as Westfield envisions here.

Responsibilities for Meola Creek

Resource	Responsibility	Comment
Meola Creek	Auckland City Council – owner	Contracts Metrowater to manage the creek
Water supply and waste water (including sewage) removal	Metrowater – ‘Retail’ water supply and sewerage	
	Watercare Services- ‘Wholesale’ water supply and sewerage	
Storm water	Auckland City Council- owner	
Combined sewers (storm water and waste water)	Auckland City Council- owner	Contracts Metrowater to separate them (but Meola is not funded)
Creek bed	DOC - owns the water course in Meola Creek?	DoC letter says that it is managed by Auckland City Council
Water Quality in Meola Creek	Auckland City	Overall responsibility
Water levels, discharges, and removal of water	Auckland Regional Council	Issues Resource Consents for Water

It appears to us that nobody takes accountability for the quality of water in Meola Creek, nor in the Waitemata Harbour where runoff and sewage discharges. Despite Te Tokaroa /Meola Reef being the most highly protected natural asset in Auckland City (as noted in the Appendices) large scale intensive development is encouraged by Auckland City planners. Water quality in Meola Creek is not measured even annually – let alone monthly; and is not published.

Aquifer, Water table and creek flow

One of the major reasons for the poor health of Meola Creek is that its natural flow has been significantly reduced so that year round, but especially in summer, the creek is as low as a few centimetres, except when Watercare Services overflows and floods occur and raise the creek level by several meters. Between its source on Plant and Food land, adjacent to the Haverstock Rd overflow; and the bridge at the top of Kerr-Taylor Reserve where the recently formed pipes end, water now flows at a small trickle. (See photos of 160 Haverstock Rd). By contrast, historical pictures show a sizable spring on Plant and Food land.

The very high variability of depth, velocity, and flows place a great burden on Meola Creek and its surrounding floodplain. Auckland City may have an engineering solution in managing the creek in this way – but the loss of normal flow, plus the addition of raw sewage and heavy metal pollutants – means the loss of nearly all native flora and fauna in and around the upper creek, and ongoing damage to the flora and fauna in the Waitemata Harbour. Erosion of the creek bank after one flood is shown in photos.

It has recently become apparent to STEPS that the water removed from the head of the aquifer by Winstones Quarrying operation at Three Kings is probably the primary cause of the significantly reduced natural flow which has been noticed by residents and members over the past 15-20 years. Refer: Report prepared for Westfield NZ Ltd by Tonkin and Taylor Ltd 8 July 2008 p1. “At its current depth (quarry base at RL34, with quarry rim at RL60-RL80 approx), resources are being extracted from **below regional groundwater level**. Groundwater within the quarry is depressed to below the quarry floor by pumping from a well within the quarry property.”

Summary of Reports in Appendices 3 and 4.

From the reports attached and other sources published by Auckland City, Metrowater and others, it is indisputable that the protected marine life at Meola Reef is being progressively poisoned by the mix of raw sewage and overflow from increased impermeable areas, roads, galvanised roofs (refer to Roofing Materials Survey referenced in Appendix 3), and runoff from developments during construction.

Meola Creek / Roy Clements Treeway is prone to flooding frequently – almost entirely because of overflows from Watercare Services (See Appendix 4B which also contains number and volumes of overflows). According to the ICS report the volume of overflows including raw sewage flowing through Meola Creek equated to 1528032 cu m/ year [or 611 Olympic swimming pools per year] on average. Nearly half of these come from 96 Haverstock Rd, and emerge adjacent to government owned Housing New Zealand Corporation (HNZC) existing properties at 160-162 Haverstock Rd, approximately 5 meters from the creek. Averaging figures for large overflow events imply that overflows equivalent to 1-2 Olympic pools at each of Lyon Ave and Haverstock Rd are typical, and that maximum flows are much larger. STEPS has included photos of the creek in flood, and also has videos of the water roaring through the pipes into the creek from both 96 Haverstock Rd and Lyon Ave during a significant downpour. Residents can see sewage in the creek at such times. This occurrence is observable many times a year, often within even 1 hour of rain commencing. Toilet paper and rubbish are commonly seen on the banks following storms.

To the Society's knowledge, no significant upgrades or improvements have been made to reduce the frequency or volume of raw sewage overflows into Meola creek since the ACDSRC Report was written in 2001. In our view it is highly likely they have significantly increased, in part because of the increase of high density development in this area. Development plans and the marginal impacts of these on an already fragile volcanic area and its related water sources, represent another incremental degradation of the environment, specifically on at least five significant listed natural features identified by the Auckland City DP as requiring protection.

Appendix 1 St Lukes Environmental Protection Society

STEPS focuses on the upper reaches of the Meola Creek, the Kerr Taylor Reserve and the green spaces surrounding it. (See Appendix 4 I2 Aerial map Upper Meola Creek)

The Society greatly values the Owairaka/ Mt Albert volcanic field, Meola Creek and other associated natural features, and is working to achieve the following aims:

1. To enhance and improve the Kerr Taylor Reserve as an open space for use by the people of the St Lukes-Sandringham-Mt Albert area, through working with the Community Board, the Auckland City Council, schools and other groups.
2. To see the quality of the water in Meola Creek improved, and the public health, environmental and cultural values increased, through working to ensure that the Auckland City Council, Watercare Services and Metrowater improve the water quality and upgrade inadequate drainage and sewerage systems.
3. To maintain or expand the extent of the existing open spaces and walkways in the St Lukes area, through working with all groups who have an interest in the area.

The Society is hopeful that as environmental awareness grows, Auckland City will “daylight” or restore the Meola Creek, and remove the piping and armouring put in place by engineers over a number of years, obscuring the once attractive natural water course. (This course of action has been officially recommended to Auckland City in the Meola Integrated Catchment Management Plan Phase 2 Report – Remedial Options (Sinclair Knight Mertz 2002).)

Eden Albert Community Board has recognised STEPS as a stakeholder in the Kerr-Taylor Reserve, and the Society has been working with Metrowater on public education talks and on planting the banks of Meola Creek in 2007 and 2008. Our plantings will reduce water temperature and enhance both bird life and marine life in the creek.

In 2008 we added Meola Creek to the list of NZ Rivers in wikipedia http://en.wikipedia.org/wiki/Meola_Creek and established a web site and blog for STEPS.

MEOLA CREEK - PROGRESS:

Several practical steps have been taken to start to protect the upper creek

June 2007 – Metrowater planting north of bridge linking MAGS and Kerr Taylor Reserve

May 2008 – Metrowater commission Te Ngahere revegetation plan for Roy Clements Treeway on MAGS land

May 2008 City Development Committee commits to improve Meola Creek (Appendix 4K)

June 2008 – Hort Research plant wetland at the headwaters of the Meola Creek (at “DSIR”, Mt Albert Rd)

June 2008 - STEPS Application to EIF for planting another wetland

August 2008 – Eden Albert Community Board notice of motion to approach ARC in relation to management of Meola Creek as a contaminated water way.

August 2008 – Metrowater boardwalk and planting on MAGS land to south west of St Lukes Garden Apartments – more planting planned

March 2009 – Published portfolio of projects to clean up Meola Creek.

May 2009 – Planted a wetland on MAGS land adjacent to northern boundary of Kerr Taylor Reserve.

Appendix 2 PLANNING PROTECTION FOR MEOLA CREEK

We note that the Auckland City (AC) District Plan (DP) Annexure 2, p3 shows the following significant natural features which directly relate to the Upper Meola Creek:

- **Volcanic Landforms – Owairaka/ Mt Albert** – approx 200 meters West; **Three Kings** approx 3km South East
- **Aquifer – Underlying Westfield St Lukes, Western Springs, Three Kings.** [It is sometimes called Meola Catchment aquifer, Western Springs Aquifer or Three Kings aquifer.] (See Appendix 4C4)
- **Owairaka, Mt Albert** and surrounding district – ie on site at Westfield
- **Ecological Area - Western Springs** – 2km north and a part of the Meola Catchment aquifer
- **Significant Stream Channel – Meola Creek** (one of only 5 publicly owned water courses in Auckland City)
- **Ecological Area – Te Tokaroa Meola Reef**

In Part 5A Natural Resources, the DP lays out how important each of these elements is. These and a few other “particular environmental elements... can and must be maintained and where practicable enhanced” (p4). The DP also states the principal goal of the Resource Management Act, sustainable resource management will be achieved by adopting strategies to address natural environment issues.

Yet within the District Plan itself, it is unclear to us that any consideration has been given to the protection or enhancement of these significant natural features of Auckland City.

The DP also states (Part 5A p 4) that a combined foulwater/ stormwater sewer system serves approximately 16% of Auckland city’s area. [We have shown in Appendix 4B that sewers in Meola catchment constitute a large part of this, and that this in turn causes ongoing problems for Meola Creek, Meola Reef and the people of Auckland.]

The DP states (Part 5A p 8) that mechanisms to recognise and enhance the qualities of water resources include:

- “Development is limited in those areas with a significant drainage problem until it is remedied.”
- “Consideration of sustainable recharge of aquifers when considering relaxation of the site coverage controls”

We request that Auckland City and Watercare Services pay heed to these words from the DP, and upgrade the infrastructure before they support/ allow any large scale Private Plan changes/ Developments such as Westfield St Lukes.

Other Planning Frameworks Relating to Meola Catchment

Te Tokaroa Meola Reef is the northern end of a 10km lava flow stretching from Three Kings. It extends 2 km north over Waitemata to within 500m of the North Shore. Meola Creek discharges to the west and Motions Creek discharges to the east of the reef.

Te Tokaroa Meola Reef is designated as:

- a Coastal Protection Area 2 under the Auckland Regional Coastal Plan;

- its marine vegetation zoned as Protection Area 1; and
- a conservation zone under the 1987 Waitemata Harbour Maritime planning scheme (p 138 ACDSRC Report)

ARC POLICY

As noted in the MINUTES OF A MEETING OF THE EDEN ALBERT COMMUNITY BOARD HELD ON WEDNESDAY, 27 AUGUST 2008

“The Auckland Regional Council (ARC) has jurisdiction over water bodies in the region. The ARC Regional Policy Statement (RPS), chapter 8, which deals with Water Quality, outlines a range of issues associated with degraded water quality within the region, and identifies a number of methods and actions to undertake with the goal of improving water quality. Meola Creek is classified within chapter 8 as a body of water with significantly degraded water quality (Table 8.2).

The following lists the relevant parts of the plan relating to bodies of water such as Meola Creek;

8.4 Policies: Development and Redevelopment

1. Land use intensification in urban areas shall only occur where adequate provision is made for:

- (i) control of sediment discharges;*
- (ii) control of stormwater discharges;*
- (iii) collection, transport, treatment, purification and disposal of sewage;*
- (iv) protection of the quality of groundwater recharge especially into aquifers used for water supply purposes;*
- (v) protection of water quality and riparian margins;*

8.4.5 Methods 4. *District plans shall not provide for land use intensification in sewered catchments that are at a maximum capacity for sewage disposal and/or have inadequate drainage (which is resulting in hydraulic overloading of the sewers) unless services are upgraded to an adequate capacity, or a commitment made to upgrading, sufficient to handle the demand that will result from the intensification.*”

In addition STEPS notes that Chapter 9 deals with Water Conservation and Allocation.

9.1 ...The management of water use has a strong regulatory focus. Part III of the RM Act establishes different presumptions to govern water use from those applying to the use of land. The taking, damming or diversion of water is prohibited unless allowed by a resource consent or by a rule in a regional plan. Exceptions to this include the taking of water for an individual’s reasonable domestic and stock watering needs or for fire-fighting. The taking of geothermal water for use for tikanga Maori is also an exception. The exceptions however are subject to there being no adverse effects on the environment. The Resource Management Act defines water as including fresh water, coastal water (sea water) and geothermal water, but excluding water in any form while in any pipe, tank or cistern. The ARC has the function under section 30(1) of the RM Act of:

- (c) The control of the use of land for the purpose of:*
 - (iii) The maintenance of the quantity of water in water bodies and coastal water.*
 - (e) The control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any water body, including:*
 - (i) The setting of any maximum or minimum levels or flows of water.*
 - (ii) The control of the range, or rate of change, of levels or flows of water.*

Appendix 3 Reports on Meola Creek

We recommend to Westfield St Lukes, Auckland City Council, their planners and their advisors two key sources of information :

- 1) Auckland City Drainage System Resource Consents, Assessments of Environmental Effects, March 2001 [“ACDSRC Report” available on line from Metrowater]
- 2) Meola Integrated Catchment Management Plan Phase 2 Report – Remedial Options (Sinclair Knight Mertz 2002) [“ICS report”] See Appendix 4A

Further information was prepared for a legal case:

- 3) Statement of Evidence by Michael McQuillan before the Environment court (St Lukes Park Owners Committee vs Auckland City Council) 11 October 2004 (RMA 626/02) [“McQuillan evidence for ACC” – attached in Appendix 4E]

NOTE: We are told that the case was resolved out of court and that in fact this evidence was never give to the Environment Court.

In addition STEPS can provide a copy of a recommended unpublished report:

- 4) Assessing and mitigating the environmental impacts of stormwater flowing into Meola Creek and its receiving environments. From the School of Geography and Environmental Science, University of Auckland, October 2005. [“UA report”].

These documents convey a picture of neglect of the past, existing and potential future environmental value of Meola Creek which flows into Waitemata Harbour on the South Western side of Meola Reef.

STEPS also recommends Manukau City Council Oruarangi Catchment Industrial Development Roofing Materials Survey *Bruce Wallace Partners Ltd, Project 11140, March 2006* which can be found on the web.

Te Tokaroa/ Meola Reef is only a few km downstream from Upper Meola Creek. STEPS finds it very difficult to reconcile the designations protecting the creek, with the past and present activities which are conducted by Auckland City, Watercare Services, and others, in the Meola Creek catchment.

The reason that Auckland City and Metrowater applied for the drainage system resource consents in 2001 was so that we can continue to pour raw sewage and stormwater down Meola Creek and other watercourses into Waitemata Harbour for at least another 35 years. No current funded plan is in place to change this situation – though STEPS has held discussions with Watercare Services, Auckland City and Metrowater on this subject.

Ch 7 of ACDSRC Report above states: “... water flows in some streams are greater than would be predicted from topographical catchment area – especially where waste water overflows originate outside the storm water catchment” [They] “add significantly to storm water flows”. ACDSRC Report also states

- The combined overflows discharge untreated wastewater into Meola Creek during approx **50%** of rain events

- Meola Creek estuary has the highest concentrations of enterococci (18,342 Ec/ 100 ml) and greatest number of days with Ec concentrations above guideline values which would require beach closure
- Stormwater runoff ... increases significantly as the amount of impermeable surfaces increases with development. Urban development also reduces the availability of rain water soakage areas.... As urban development progresses the proportion of impermeable surface tends to increase and this generates increased volumes of runoff. In general terms every millimetre of rain falling on a square meter of impermeable surface gives rise to one litre of stormwater runoff (p37)
- Likely future climate – Salinger et al (2001) conclude: climate warming will lead to increases in peak flows from storms in Auckland urban catchments from now until 2050

ICS report states:

- Poor water quality in Meola Creek is a product of both waste water and storm water discharges to the creek. The main source of most bacterial and nutrient contaminants in Meola creek is from waste water discharged to the creek from overflow structures. Heavy metals and suspended solids within the creek originate primarily from storm water runoff that overflows from the combined sewer system.
- Measured bacterial levels were high along the whole length of Meola Creek. Levels in the upper reaches of the creek in the vicinity of MAGS exceeded the NZ guidelines for recreational body contact activities of 125 faecal coliforms and 33 enterococci.
- **The upper section of Meola Creek is in a far worse state than the lower reaches of the creek** [usually the opposite occurs in most waterways.]
- To a large extent the ecological health of Meola Bay depends on the health of the upstream catchment. Many of the pollutants from stormwater runoff and sewage overflows into Meola Creek ultimately end up in the coastal area.
- Approximately 40% of the Meola Catchment contains combined sewer systems. In addition most of the waste water flows from soakage areas and separated areas contribute to the combined pipes.
- There are 26 overflows within Meola Catchment that discharge combined wastewater and stormwater to the Meola Creek. [61% occur in the small upper creek area shown in our aerial map (See Appendix 4A6)]
- **Level of service of combined sewer/ stormwater well below design standards of Auckland City and Metrowater – 50% cannot handle 1 in 3 year storm flow** (Section 2 p2)
- Up to 24% of combined wastewater within 1500 Ha catchment discharged to Meola creek in 1992 (Section 2 p3)
- Haverstock Rd and Lyon Ave (Watercare Services overflows) worst – make up 90% of total flows in upper creek (Section 2 p3)

The UA report documented that

- zinc from roofs and tyres was at very high levels in Meola Creek upper catchment
- the estuarine receiving environment next to Meola Reef has critical levels of zinc and other heavy metals.

The report recommended that mitigation should focus on at source methods of controlling stormwater. These include **minimizing impervious surfaces** when constructing new

subdivisions, ie. low impact urban design. Remediation can also include approaches such as siltation or detention ponds and sand filters to remove zinc and other contaminants before they enter the creek.

In October 2004, McQuillan evidence for ACC stated, [with regards to 4 Wagener Place, which is about:

- 100m upstream from Westfield St Lukes;
 - 50 m upstream from the Edendale Branch Watercare Services overflow at Lyon Ave; and
 - 200 m downstream from Haverstock Rd Watercare Services overflow]
-
- a feature ... is the number of overflow relief points that discharge untreated waste water directly to the Meola Stream...[Meola creek] is considered highly polluted
 - [High density residential] developments place a greater strain on waste water and storm water infrastructure than most business developments...primarily because of peaking factors including a main peak in water use and waste water disposal between the hours of 6am and 9 am...[as a] result of early morning ablution routines
 - **The principle source of pollution is wastewater overflows from Watercare main trunk line upstream in Haverstock Rd**
 - Just downstream is another major Watercare waste water overflow [Lyon Ave]. This overflow regularly operates even in only light rainfall events
 - ...A signal to readers of the District Plan that the site [4 Wagener Place] is appropriate for high density residential activity. In my view this would be conveying an incorrect signal given the public health risks associated with the pollution of Meola Stream and constraints associated with the area's waste water infrastructure.
 - ... in the general area of **St Lukes/ Morningside where there are significant infrastructural issues**

In October 2004, Dietsch evidence for ACC stated:

- Sandringham... "area of change" is accorded a priority 3 rating; indicating that the area requires infrastructural upgrading before planning for growth may start.
- In light of the priority 3 rating, [my view that 4 Wagener place would be capable of accommodating in excess of 100 residential units]...is dependent on the availability of **sufficient infrastructural capacity.**

To provide additional context, Auckland City Council advised that the open space provision in the Eden-Albert Ward in 2004 was 2.2 ha per 1000 people - the lowest for Auckland city, which averages 4.27 ha per 1000 people as compared to 4 ha per 1000 people, the general NZ standard. The fact that Upper Meola Creek is in a ward which has approximately half the green space of every other part of Auckland City is relevant to the channelling of runoff, and waste water discharge in the Meola Creek catchment, since green spaces usually have a high proportion of permeable surface. Permeable surfaces in this volcanic area are key to enhancing water quality in Meola Creek and Waitemata harbour and maintaining the health of the aquifer.

Appendix 4 References and Attachments

Extracts from Auckland City, Metrowater and Watercare Services Reports on Meola Creek and Western Springs.

A Meola Integrated Catchment Management Project Phase 2 report- Remedial Options (Sinclair Knight Merz 2002)

B Watercare Detailed Annual Sustainable Development Report 2001 and related clarifications

C Meola 1C Management Project Phase 1 May 2000 (Sinclair Knight Merz)

D Integrated Catchment Study Stage 1D Water Quality Monitoring Report (Area 1) (Auckland City, Metrowater, 2004)

E Statement of Evidence by Michael McQuillan before the Environment court (St Lukes Park Owners Committee vs Auckland City Council) 11 October 2004 (RMA 626/02)

F1 Watercare Services Wastewater Asset Management Plan 2004-5

F2 Watercare Services Wastewater Asset Management Plan 2002-3

F3 Auckland City Drainage System Resource Consents, Assessments of Environmental Effects, March 2001

F4 Metrowater Sewer Separation Strategy

G Meola Stormwater Management Plan Volume 5 – Management Plan (1997)

H1 Map – Meola Creek Catchment

H2 Auckland City (AC) District Plan (DP) Annexure 2, p3

I1 Upper Meola Creek Survey Map 1842

I2 Aerial map Upper Meola Creek – between Westfield St Lukes Mall and “DSIR” on foothills of Owairaka/ Mt Albert

J Response from Auckland City Council regarding Westfield St Lukes Inadequate Stormwater Capacity May 2009-05-27

K Auckland City Council Media release 9 May 2008 Work planned to ease Meola Creek pollution