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Date: 22 February 2023
Memo To: Paul Whyte

Copy To: Mark Wheeler, Richard Coningham, Stephen Rooney, Jon Cunliffe, Geoff Dick, Stuart Donaldson, Pere Hawes, Jamie Sigmund, Steve Murrin, Laura Skilton.

From: Brett Walker

Subject: Proposed Residential Plan changes 2022 Servicing – Three Waters and Transport

(Report prepared by Brett Walker)

Purpose

1. BECA Ltd have been engaged by Council to assist in the processing of four proposals to rezone land to Residential in and around Blenheim
2. BECA Ltd have requested an update on servicing capacity potential for the four proposed residential Plan Change areas. Ref: CM22219816, CM22219817
3. This information will be used by BECA to evaluate each proposed Plan Change area for the purposes of planning support, or not of each suggested plan change proposal.

Rezoned Areas

4. Present situation:
Five areas of large residentially zoned land within Blenheim are remaining to be developed. Totalling approximately 157 Ha plus multiple smaller lots and Infill that will also be developed.
 - 22 Ha - Rose Manor, Griffen etc to the east of Thomsons Ford Road
 - 36 Ha - Property to the west of Thomsons Ford Road
 - 63 Ha - Hedley, Kinset etc between Old Renwick road and Middle Renwick Road
 - 4 Ha - Property between Severne Street and Battys Road
 - 32 Ha - Clifford / Marris at the southern end of Battys Road
5. Proposal:
Four areas within Blenheim are to undergo a Plan Change for residential development. Totalling approximately 85 Ha. (Roughly 50% Increase to present situation). Refer to Appendix 1.0 for Map
 - 18 Ha - S Clifford
 - 12 Ha - Kerepi
 - 31 Ha - St Andrews
 - 24 Ha - Montford

General Servicing comment

Water and Wastewater

6. Councils Planning & Development Engineer's commentary:
 - a) Analysis and modelling had been carried out on the existing zoned areas in Blenheim, including all the areas shown within the Proposed Marlborough Environment Plan (MEP) as "Urban Residential 2 – Greenfields" zone.

- b) Analysis and modelling has recently been updated to include the four areas within Blenheim to undergo a Plan Change. Ie: S Clifford, Kerepi, St Andrews and Montford.
- c) The previously planned upgrade proposals to the water and wastewater systems will now be updated to include provision for the proposed four areas within Blenheim to undergo a Plan Change (S Clifford, Kerepi, St Andrews, or Montford).
 - o Wastewater discharge Resource Consents require update and approval sought.
 - o Water take Resource Consents require update and approval sought.
 - o Funding models shall be completed, Council approval sought and included within the Long Term Plan (LTP)
 - o Wastewater upgrades require specific sites for planned infrastructure.

Stormwater

- 7. Councils Infrastructural Projects Engineer, and Council Rivers and Drainage Engineer's commentary:
 - a) Investigations and modelling is currently underway or complete for the existing zoned areas.
 - b) Additional modelling could be done to determine the impact of the four areas within Blenheim to undergo a Plan Change. Ie: S Clifford, Kerepi, St Andrews and Montford.
 - c) Council have not at this stage completed modelling of the individual stormwater systems. However, do know enough to identify the constraints to accommodate the proposed four areas (S Clifford, Kerepi, St Andrews, or Montford).
 - d) All Blenheim stormwater systems eventually discharge to the Opaoa River.
 - e) Council Rivers section modelled the Taylor / Opaoa River as a capacity check and trialled future development runoff and climate change within Blenheim. The results were presented to Council at a workshop February 2022.
 - f) The presentation highlighted that the Taylor River through Blenheim did not have the capacity in the foreseeable future to take any additional discharge from its existing catchments.
 - g) The workshop outcome suggested that a policy is required across all proposed Developments within Blenheim to adopt a principle of "stormwater neutrality".
 - h) This outcome has yet to be formalised and ratified by Council.
 - i) "Stormwater Neutrality" covers both quantitative and qualitative aspects of stormwater runoff. Council must attenuate the runoff from any additional residentially zoned areas to mimic that of a pre-development area. Council must filter out contaminants generated within residentially developed areas such as silts, hydrocarbons and zincs via treatment options.
 - j) Stormwater attenuation with throttled outlets are considered an acceptable engineering solution, however this may not be easily achieved. Some areas will be limited by elevation with minimal falls to waterways, coupled with high ground water levels within the sites interrupting the ability to attenuate runoff.
 - k) Some developments may need to provide in excess of 15% of land area to accommodate attenuation.
 - l) Secondary flow paths must be considered for rainfall events that exceed the attenuation Councils levels of service / design attenuation volumes.

Transport

- 8. Council Roading Section – "Marlborough Roads" commentary.
 - a) Council has not undertaken any modelling for wider effects of any of the four areas within Blenheim to undergo a Plan Change, however a spreadsheet model used for preliminary assessment of the S Clifford area.

Servicing Comments by Area

9. Four proposed Plan change areas have been identified:
Refer to Appendix 1.0 for Map

- S Clifford
- Kerepi
- St Andrews
- Montford

10. **S Clifford** – refer to Appendix 2.0 for Servicing Schematic

a) Water

- Connection Points
 - Westwood Avenue
 - Severne / David Street – proposed watermain
- Upgrade / new infrastructure requirements to provide local capacity
 - Watermain upgrade along Battys Road (Middle Renwick to 80m south of Lakings)
 - Installation of a Watermain along Battys Road (80m south of Lakings to David)
 - Installation of a Watermain along David Street (Battys to Severne)
- Other information
 - Installation of larger infrastructure linkages within the site for benefit of other development.

b) Wastewater

- Connection Points
 - Battys Road “North” Wastewater Pump Station
- Upgrade / new infrastructure requirements to provide local capacity
 - Battys Road “South” Wastewater Pump Station (Larger capacity pump station).
 - Springlands Green Wastewater Pump Station (Changes to controls)
 - Upgrade / new infrastructure requirements to provide local capacity
 - Installation of a Wastewater main along David Street to Battys Road “North” Pump Station.
- Other information
 - Installation of larger infrastructure for benefit of other development
 - Extensions of infrastructure for future connection to the land to be developed to the west of Westwood.

c) Stormwater

- Connection Points
 - Old Fairhall Stream.
- Upgrade / new infrastructure requirements to provide local capacity
 - Installation of trunk stormwater mains within David Street, Severne Street and Battys Road.
- Other information
 - Installation of stormwater attenuation ponds to restrict discharges to an equivalent to predevelopment runoff required.
 - Installation of stormwater treatment required
 - Extensions of infrastructure to the West to convey existing runoff through the development.

- Installation of a stormwater pump station downstream of Battys Road may be required.
- Construction of Roads as secondary flow paths to convey residential stormwater from the west through the development.

d) Transport

- Connection Points
 - Fourth leg on the existing roundabout on SH6 – will require Waka Kotahi to approve.
 - David Street
 - Active transport connection through Severne Park to Lakings Road
- Upgrade / new infrastructure requirements to provide local capacity
 - The SH6 roundabout will require upgrading as a result of undeveloped land. Additional upgrading will be required as a result of this subdivision. While preliminary drawings from the applicant's consultant (refer Appendix 2) show the central island in the same location, it is considered the roundabout will require a full rebuild, with two circulating lanes. The upgrade should be partially funded by Waka Kotahi however the bulk of the upgrade (relocating central island and fourth leg) will be due to the re-zone.
 - David Street will need to be widened, kerb and channel installed and footpaths installed. The existing one-lane bridge should be widened.
 - The Murphys/Battys/Middle Renwick Road roundabout will require upgrading as a result of undeveloped land, however additional upgrading will be required as a result of this subdivision.
- Other information
 - Marlborough Roads is also concerned about Lakings/ Boyce Street intersection as this is the quickest route to the town centre from David Street, however delays here may result in additional traffic using the Murphys/ Battys roundabout
 - The connection to Middle Renwick Road needs to be built to at least collector road standard.
 - Council has received a draft Traffic Impact Assessment for S Clifford, however as at 8 November, it fails to adequately assess the effects of the plan change above the already re-zoned land and development potential. The consultant is going to update their analysis.

11. **Kerepi** – refer to Appendix 3.0 for Servicing Schematic

a) Water

- Connection Points
 - McLauchlan Street – proposed watermain
 - Oakley Avenue – existing watermain
 - Waipuna Street – existing watermain
- Upgrade / new infrastructure requirements to provide local capacity
 - Installation of a Watermain for the full length of McLauchlan Street
 - Installation of a Watermain along Old Renwick Road (McLauchlan to Waipuna)
- Other information
 - Installation of larger infrastructure linkages within the site for benefit of other development.
 - Reimbursement of cost for water infrastructure installed by Council within property to the west.

b) Wastewater

- Connection Points
 - McLauchlan Street Wastewater Pump station – located 450m south of site
- Upgrade / new infrastructure requirements to provide local capacity
 - Installation of a Wastewater main to the McLauchlan street Pump Station.
- Other information
 - Installation of larger infrastructure for benefit of other development required.

c) Stormwater

- Connection Points
 - Caseys Creek – southern end of the site, upper Opaoa River.
- Upgrade / new infrastructure requirements to provide local capacity
 - Possibly Caseys Creek pump upgrade.
- Other information
 - Installation of stormwater attenuation ponds to restrict discharges to an equivalent to predevelopment runoff required.
 - Installation of stormwater treatment required.
 - Construction of Roads as secondary flow paths to convey residential stormwater from the west through the development.
 - Check of Caseys Creek pump outfall capacity is required.

d) Transport

- Connection Points
 - Old Renwick Road
 - Oakley Avenue
- Upgrade / new infrastructure requirements to provide local capacity
 - Analysis of the Rose Manor roundabout has not been done for this subdivision, however previous analysis shows that this roundabout is satisfactory to take additional traffic from development to the west until a connection to Thompsons Ford Road is created.
 - Rose Manor Drive has been constructed as a local road and should have been constructed as a Collector Road. No parking lines will probably need to be painted.

- Continued upgrading of Old Renwick Road (between #63 and east of site) to achieve a 10.9m wide carriageway. A right turn bay will be required into the site as there will not likely be room for a roundabout due to Caseys Creek
 - Footpath on northern side of Old Renwick Road required.
- Other information
 - A preliminary internal road layout was provided to council and included in Appendix 3.
 - It is likely that the McLauchlan/Nelson Street intersection will be upgraded as part of the Marlborough School Project.
 - The connection to Old Renwick Road needs to be built to at least collector road standard

12. **St Andrews** – refer to Appendix 4.0 for Servicing Schematic

a) Water

- Connection Points
 - To an undefined trunk main within the Blenheim area.
 - Proposed Well / Treatment site SH1 by Council.
This thought is only at a preliminary stage and requires a review of concept and Resource Consent approval.
- Upgrade / new infrastructure requirements to provide local capacity
 - Installation of a Watermain to the connection point within the Blenheim area.
 - Blenheim Network upgrades as a direct result of this site.
Extent currently unknown.
 - Installation of Well's / Treatment within the Council site SH1.
Pending review of concept.
- Other information
 - Installation of larger infrastructure within the individual sites for benefit of other developments, ie: Riverlands.

b) Wastewater

- Connection Points
 - Main Outfall Pump Station (MOPs) at Alabama / Schools Road.
- Upgrade / new infrastructure requirements to provide local capacity
 - Main Outfall Pump Station (MOPs) pump upgrades.

c) Stormwater

- Connection Points
 - Catchment on northern side of SH1 to the Opaoa River.
 - Catchment on southern side of SH1 to the New Snowdens Basin.
- Upgrade / new infrastructure requirements to provide local capacity
 - Installation of trunk stormwater mains throughout the proposed Plan Change area to the connection points.
 - Snowdens stormwater attenuation basin must be completed prior to completion of first stage of this development.
- Other information
 - Installation of stormwater attenuation ponds to restrict discharges to an equivalent to predevelopment runoff required.
 - Installation of stormwater treatment required.
 - Installation of stormwater pumps may be required to maintain discharges during higher receiving water levels.
 - Construction of Roads as secondary flow paths to convey residential stormwater from the west through the development.

d) Transport

- Connection Points
 - SH1 – likely to be a new roundabout. Will require Waka Kotahi to approve.
 - South Street
 - Active transport connections to Whale Trail
- Upgrade / new infrastructure requirements to provide local capacity
 - New roundabout n SH1 – to be paid fully by development levies from re zone

- Possible signalisation of SH1/Stuart Street noting there are issues already here and will get worse. This will require Waka Kotahi approval as it is a state highway
- Additional traffic will likely add to issues at Sinclair/Main roundabout
- Consideration to upgrade SH1 with pedestrian facilities – this will assist with the RSE workers site at 3023 and 3043.
- Extend the 50 km/h speed limit to past the site connection (note that more connections to SH1 will reduce the speed, but something Waka Kotahi will need to approve)
- Other information
 - It is unlikely that Waka Kotahi will allow for more than one access point. The applicant's agents agree with this.
 - The connection to SH1 needs to be built to at least collector road standard
 - Additional traffic on Kinross Street rail crossing may require KiwiRail consultation

13. **Montford** – refer to Appendix 5.0 for Servicing Schematic

a) Water

- Connection Points
 - Waititi Avenue at Alabama Road – existing watermain
 - The northern end of Waititi subdivision or Tavera Street – existing watermains
- Upgrade / new infrastructure requirements to provide local capacity
 - Network upgrades as a direct result of this site. Extent currently unknown.
 - Installation of a Watermain to link Muller / Tavera / Waititi
- Other information
 - Installation of larger infrastructure linkages within the site for benefit of other development

b) Wastewater

- Connection Points
 - Main Outfall Pump Station (MOPs) at Alabama / Schools Road
- Upgrade / new infrastructure requirements to provide local capacity
 - Installation of a Wastewater main to the Main Outfall Pump Station (MOPs).
 - Main Outfall Pump Station (MOPs) pump upgrades

c) Stormwater

- Connection Point
 - Town Branch Drain
- Upgrade / new infrastructure requirements to provide local capacity
 - Snowdens stormwater attenuation basin must be completed prior to completion of first stage of this development.
- Other information
 - Installation of stormwater attenuation ponds to restrict discharges to an equivalent to predevelopment runoff required.
 - Installation of stormwater treatment required.
 - Installation of stormwater pumps may be required to maintain discharges during higher receiving water levels.
 - Construction of Roads as secondary flow paths to convey residential stormwater from the south through the development is required.
 - Consideration of effects of overdesign rainfall event is required, noting that the existing site is the lower in the area and currently provides for storage for some of the greater catchment.

d) Transport

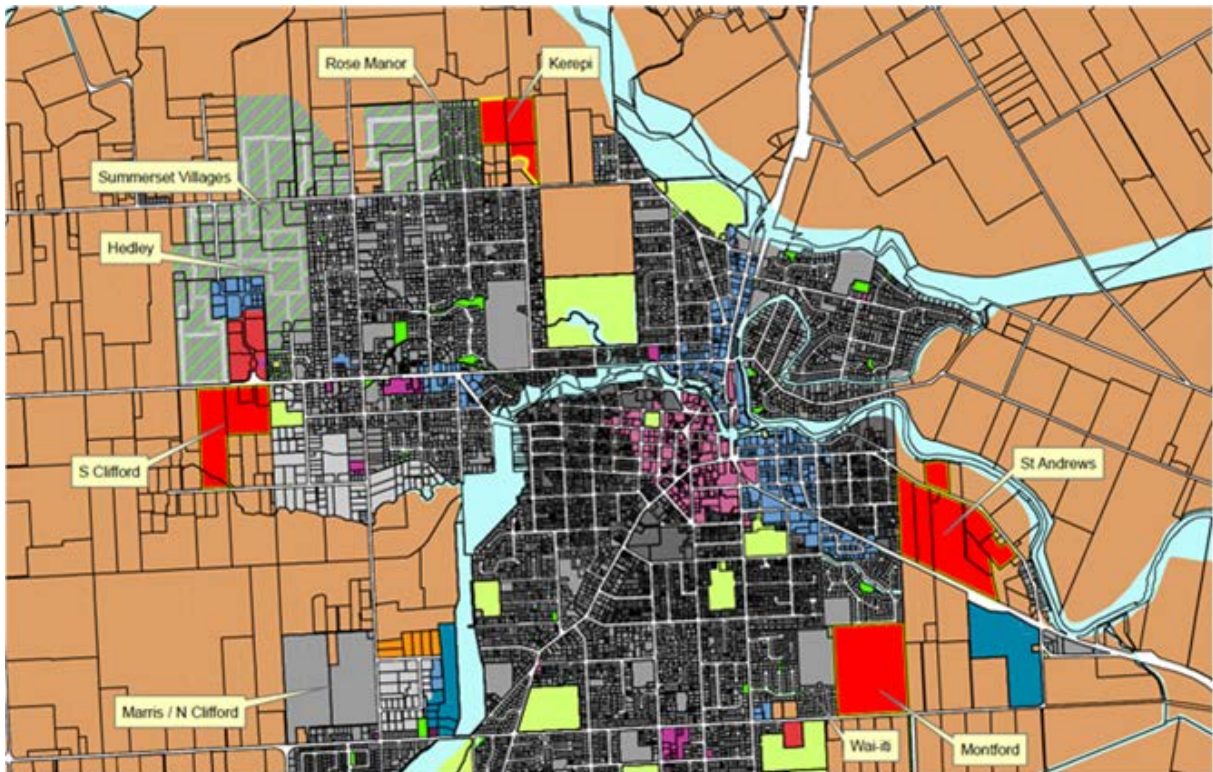
- Connection Points
 - Alabama Road
 - Wai-iti Avenue (section has been purchased at northern end to allow for this)
 - Muller Road / Tavera Street (applicant has suggested this will occur)
 - Active connections to existing trails
- Upgrade / new infrastructure requirements to provide local capacity
 - Road Widening on Alabama Road consistent with development to west
 - New intersection on Alabama Road, with a right turn bay.
 - Possible upgrade of Redwood / Alabama Road (roundabout)

- Possible upgrade of Muller/Redwood, if a connection through here shows a reasonable proportion of vehicles using this intersection.
- Other information
 - Access to Muller/Tavera dependant of the ability to cross the open drain, noting that developer will want a culvert while council Freshwater Management team may want a bridge based on other consents
 - Due to other developments proposed, including on the southern side, a solid flush median with right turning bays is likely to be long term layout of Alabama Road.

Appended:

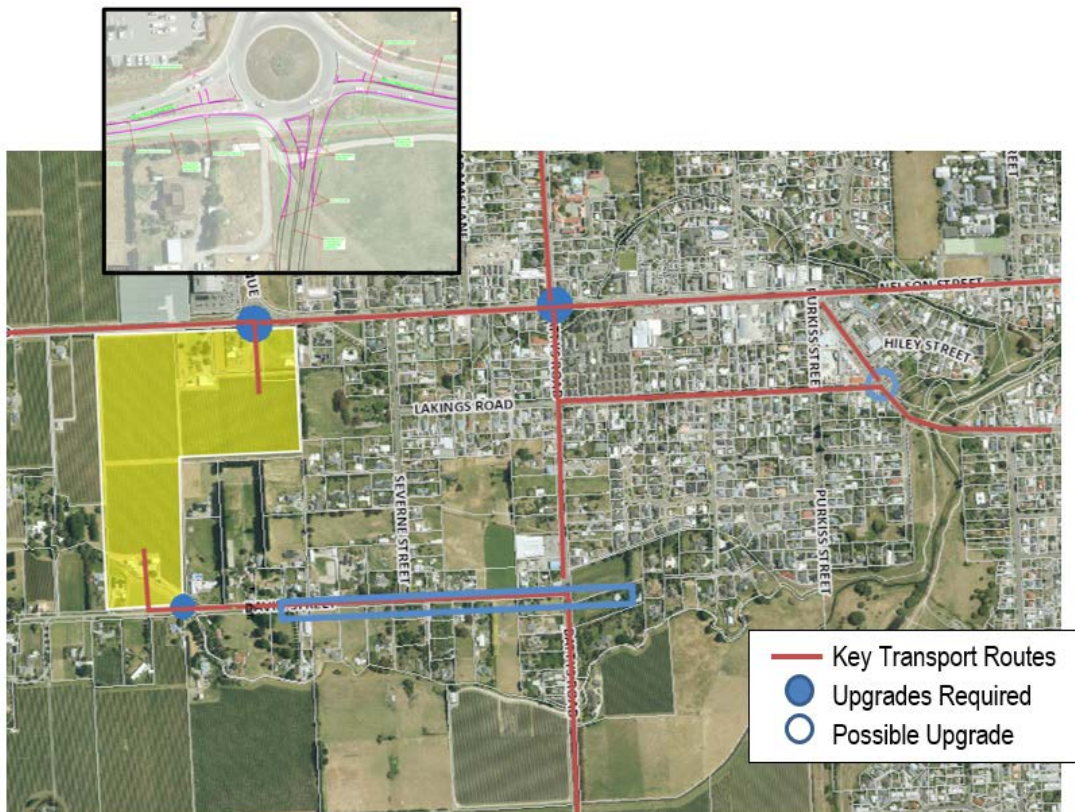
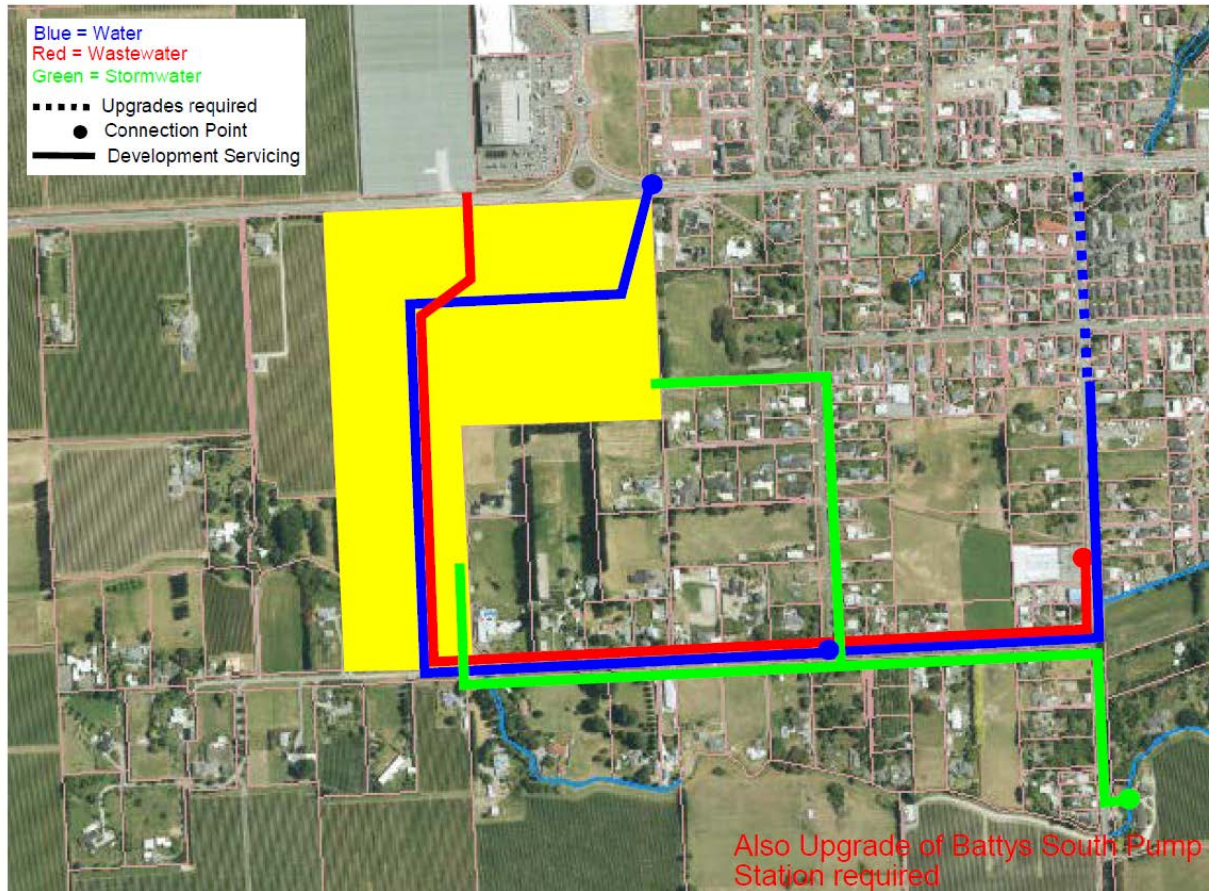
1. **Plan Change Proposals – Map**
2. **S Clifford** - Schematic for servicing
✚ Three Waters
✚ Transport
3. **Kerepi** - Schematic for servicing
✚ Three Waters
✚ Transport
4. **St Andrews** - Schematic for servicing
✚ Three Waters
✚ Transport
5. **Montford** - Schematic for servicing
✚ Three Waters
✚ Transport

1. Plan Change Proposals - Map



2. S Clifford - Schematic for servicing

S Clifford

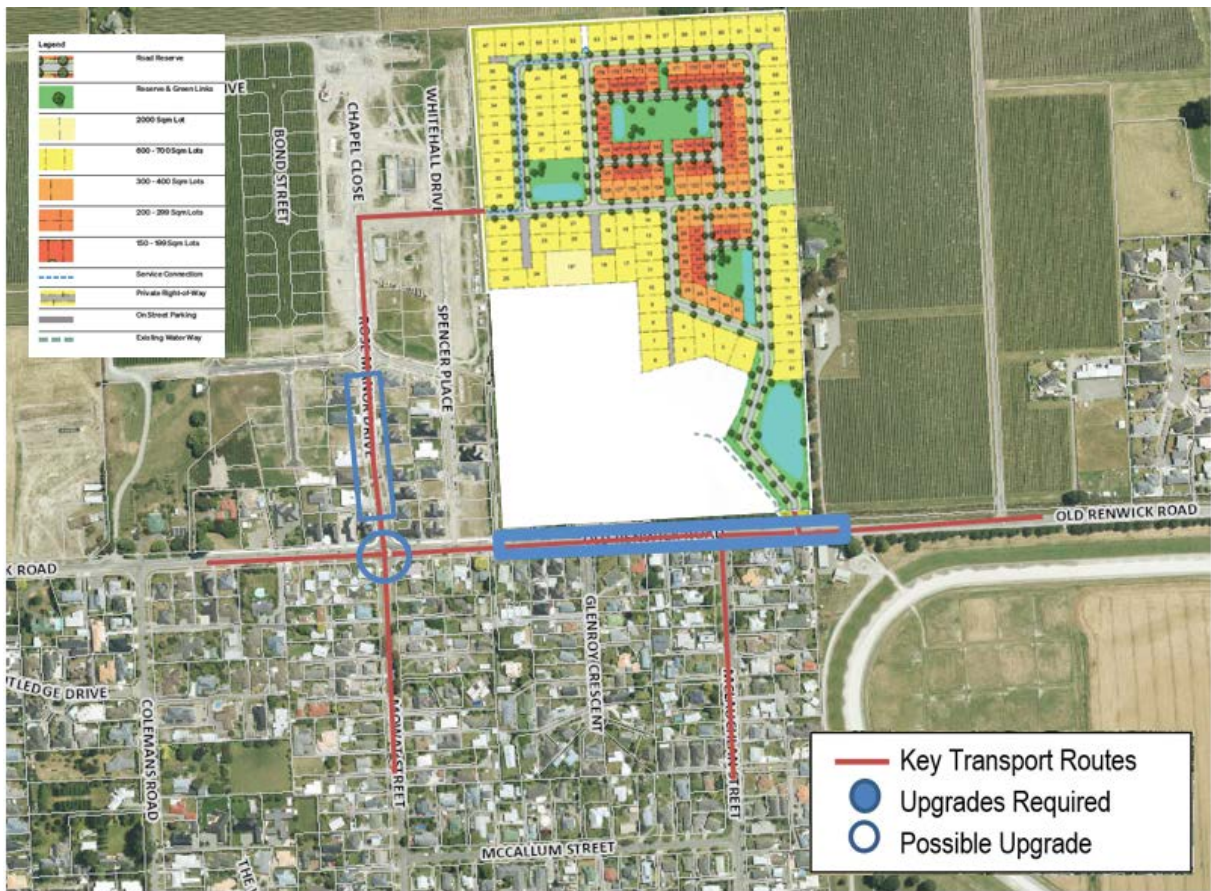


3. Kerepi - Schematic for servicing

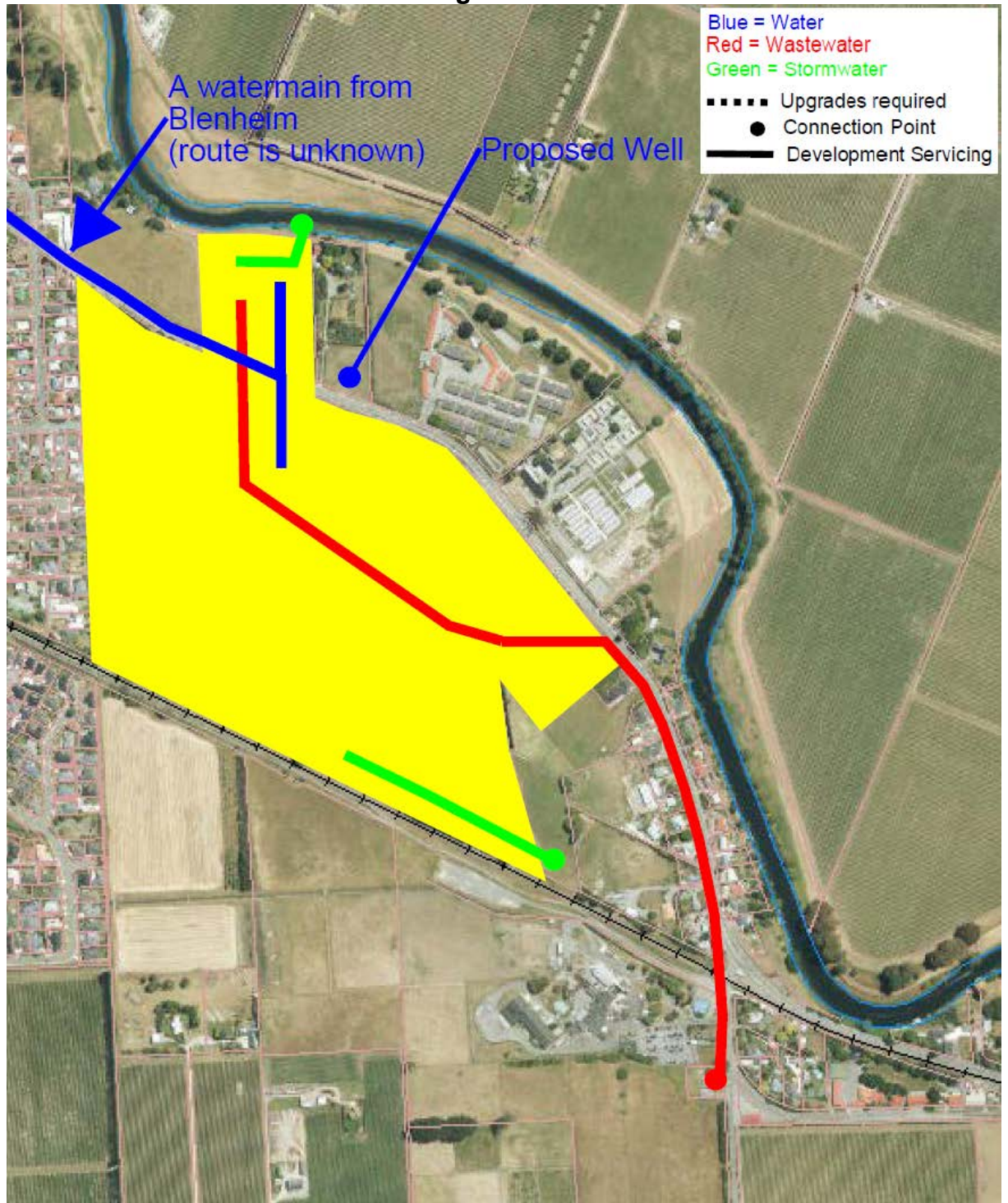
Kerepi



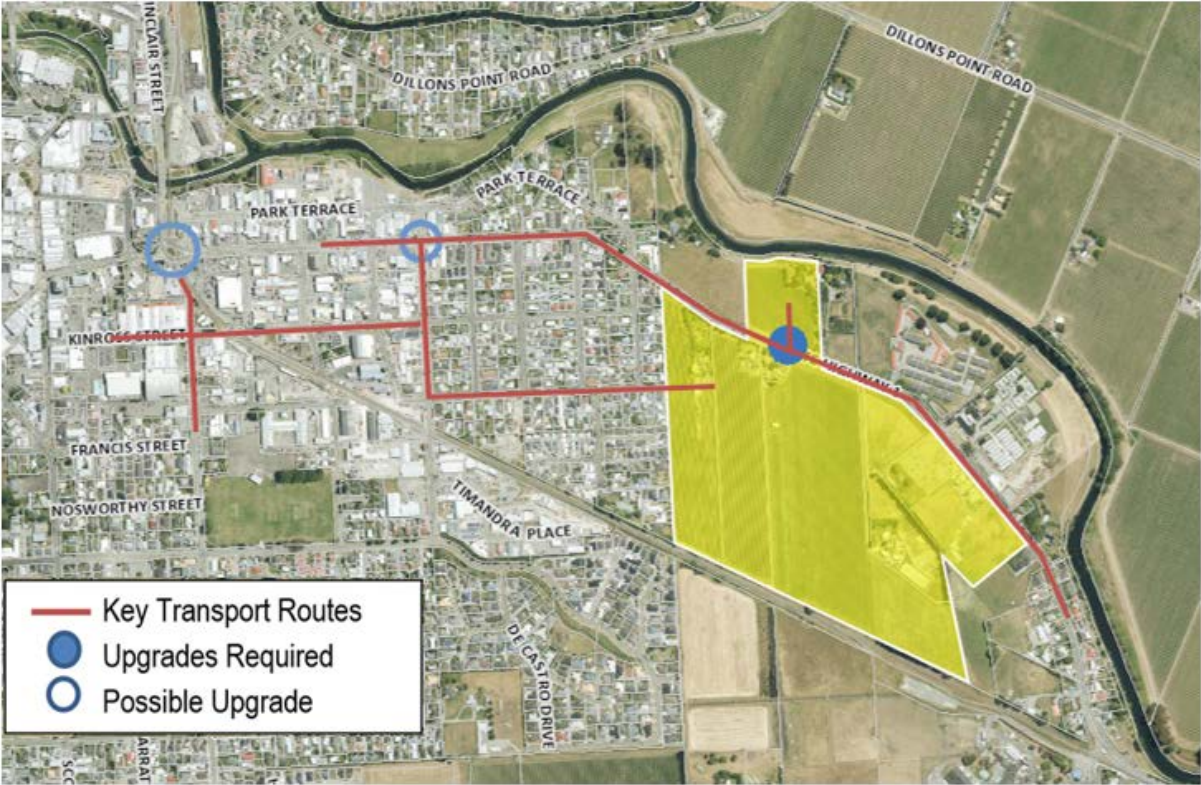
Kerepi - Schematic for servicing continued



4. St Andrews - Schematic for servicing



St Andrews - Schematic for servicing continued



5. **Montford – Schematic for servicing**
Montford

