Main South Road and Barters Road
Intersection Upgrade

Notices of Requirement and
Assessment of Effects on the Environment
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1. Introduction

The NZ Transport Agency (the Transport Agency), together with Christchurch City Council (CCC), is planning improvements to the Main South Road (State Highway 1)/ Barters Road / Marshs Road intersection and the linkage from Pound Road to State Highway 1 (SH1) in Templeton. The purpose of the proposed improvements is fourfold, being to:

- improve the current safety and efficiency issues for traffic at the Barters Road and Marshs Road access onto SH1;
- provide for the short to medium term travel demands created from future use of the Pound Road bypass;
- improve connectivity and safety for cyclists and pedestrians;
- provide a safer and more efficient relocated railway crossing for motorised vehicles; and
- enable access to the new Plan Change 19 development.

The area subject to these Notices is shown in the figure below:

The Resource Management Act 1991 (RMA) prescribes that a Requiring Authority must undertake an assessment of effects on the environment (AEE) prior to notifying a requirement for a designation. Accordingly, the purpose of this AEE is to support two Notices of Requirement (NOR), being:

- The alteration to the existing designation for the Main South Road (SH1) by the Transport Agency; and
- The designation of a new Pound Road and Waterloo Road crossroads intersection by CCC.
Although there are two Notices of Requirement, both have been incorporated and considered in the one AEE. The designation plans and land requirement plans are included in Appendix C.

The project consists of the following three components:

- **Local Road Component.** The realignment of Pound Road and Waterloo Road to create a new signal controlled crossroads intersection to the northeast of the existing intersection and closure of the Barters Road rail crossing. The old portions of Waterloo Road (Waterloo Road to the east of the existing intersection with Pound Road) and Pound Road (between Waterloo Road and the new Pound Road alignment) will effectively be closed. The future of these sections of road will be determined in consultation with CCC at the detailed design phase. A section of the old Pound Road alignment may be required to provide access to private property.

- **State Highway Component.** A new Pound Road / SH1 traffic signalised intersection with widening of the SH1 carriageway and minor changes to the SH1 layout on the approaches to this intersection.

- **Permitted Component not requiring a new designation or alteration.** Creation of a ‘T’ intersection at Waterloo Road / Barters Road, closing the rail crossing and creating a cul-de-sac on the southern portion of Barters Road between SH1 and the rail crossing under the Local Government Act road closing/stopping procedures.

This AEE has been prepared in accordance with sections 168, 168A and 181 of the RMA and comprises the following:

- A description of the background of the project;
- Identification of the relevant provisions of the RMA;
- A description of the existing environment;
- A description of the proposed works in sufficient detail to address the matters set out in s176A(3) of the RMA;
- An outline of alternative options considered;
- An assessment of the actual and potential effects on the environment;
- A summary of the consultation undertaken in relation to this project; and
- An assessment of the project against the relevant statutory documents.

This AEE is supported by the following six technical reports which are contained in the appendices and referred to directly in this document where appropriate.

- Beca Infrastructure Ltd, *SH1 Barters Road Investigation and Reporting – Assessment of Air Quality Effects*, April 2012.
2 Background

2.1 Project Background and Objectives

The Christchurch Rolleston and Environ Transportation Strategy (CRETS) was undertaken by Selwyn District Council (SDC), Christchurch City Council (CCC), Environment Canterbury (ECan), Christchurch International Airport Limited (CIAL) and the Transport Agency. The strategy was completed in 2007.

The purpose of the strategy was to ascertain the transport requirements in the Christchurch and Rolleston area for the following 25 year period. The strategy identified shortcomings in the strategic transport network to the southwest and south of Christchurch and developed and assessed options to counter the identified shortcomings.

The strategy expressed a desire to remove through traffic from the Hornby area, and concluded that the Pound Road bypass should become a national arterial in the medium term. The strategy recognised that modifications to Pound Road would be required and a new designation would be necessary for this work. Figure 1 below shows the proposed route hierarchy identified in CRET.

![Figure 1: CRET Proposed Route Hierarchy](image)

Following CRET, the Transport Agency and Christchurch City Council have supported a future western airport bypass route, implementing improvements to the Pound Road intersections with Yaldhurst Road (SH73) and Buchanans Road. The Transport Agency is currently investigating realignment options for Broughs Road to provide a more direct connection to McLeans Island Road and hence to Pound Road to the north of Christchurch International Airport.

There is also continuing commercial and industrial development between SH1 and Pound Road (areas such as Dakota Park and Waterloo Business Park). Access between these developments and the areas to the north and south of Christchurch will be facilitated by improvements to the current route which will
become a future western airport bypass route. Benefits to the wider community are also likely, with the removal of some road based freight movements from the residential areas of Hornby and along Carmen Road (SH1).

The Western Corridor upgrade, one of three Christchurch Roads of National Significance (RoNS) projects, involves increasing the capacity, efficiency and safety of SH1 around the western side of Christchurch. Physical works on the Western Corridor are currently underway, with SH1 being 4–laned together with significant intersection improvements and new interchanges. To complement these improvements, the Transport Agency has determined that interim improvements to the future western bypass at Barters Road and Broughs Road will extend the life of the upgraded SH1, deferring the need for additional capacity improvements for a number of years.

In addition, as part of its on–going monitoring programme to evaluate the safety and efficiency of the State highway network, the Transport Agency identified that there were safety concerns and peak period delays at the Main South Road (SH1) / Barters Road / Marshs Road intersection, which would require improvements to the State highway and local roading network in the vicinity.

Beca Infrastructure Ltd undertook an options assessment to determine the most appropriate means for improving the safety and efficiency of the Main South Road (SH1) / Barters Road / Marshs Road crossroads intersection at Templeton, as well as the identification and analysis of options for improving the linkage from Pound Road to SH1, currently via Barters Road. This report is attached as Appendix A (Beca Infrastructure Ltd, SH1 Barters Road Intersection I&R – Scheme Assessment Report, March 2013). This assessment was updated in the report Attached as Appendix B (Beca Infrastructure Ltd, SH1 Barters Road Intersection I&R – Scheme Assessment Addendum Report, November 2013).

As determined through traffic surveys and detailed in the Scheme Assessment Report, the Barters Road intersection is currently subject to prolonged peak periods of traffic where right turning and through traffic from Barters and Marshs Road are restricted from making safe right turns onto SH1. Peak hour traffic volumes result in few gaps for traffic to turn into / out of the local side roads, which is further compounded by other distractions at the intersection such as the rail crossing, shops and parking. Traffic modelling of the intersection predicts that the Level of Service (LOS) will become unacceptable in the future and signals (traffic lights) will be required to reduce the delays to an acceptable level. In addition, safety will become more of a key issue at the intersection as traffic volumes grow, particularly with increasing use of the Pound Road bypass as an alternative route to the north and the airport rather than via Main South Road through Hornby.

The proximity of the existing rail corridor to the SH1 / Barters Road intersection and Waterloo Road / Barters Road intersection is also a concern. Queues frequently back up from the SH1 / Barters Road intersection toward the rail crossing, creating the potential for vehicles to queue over the railway crossing. Significant queues have also been observed extending back from the railway crossing toward the SH1 / Barters Road intersection when the barrier arms are down.

Furthermore, the Barters Road / Waterloo Road intersection is immediately north of the railway crossing and this intersection can become blocked when the railway barrier arms are down.

2.2 Christchurch City Council Roading Network

All legal roads within Christchurch form part of the Special Purpose (Road) Zone. Land vested in the Council as road is deemed to be included in the Special Purpose (Road) Zone. The principal purpose of this zone is to enable travel, property access and the transportation of goods. Designations of the local road network apply only to those sections of road subject to road widening and new roading works. These
designations are uplifted once construction is complete as any construction or reconstruction of a roadway within the Special Purpose (Road) Zone generally does not require resource consent from CCC provided standards around roadway widths, medians and the like are complied with. The rules relating to the Special Purpose (Road) Zone are set out in Volume 3, Part 8, Clause 4 of the Christchurch City Plan (City Plan).

### 2.3 State Highway Designation

The entire Transport Agency road network within Christchurch is designated under the City Plan. The portion of SH1 which is of relevance to this Notice of Requirement is presently designated for “SH1” purposes in the City Plan. The designation width of SH1 within the project area is typically 20 – 30m.

The designation allows for the Transport Agency to undertake works within the designated area in accordance with its purposes (being road) without obtaining resource consent from CCC for land use matters subject to section 10(1) of the RMA. As per section sub-clause 2.2.1 (Volume 3, Part 12) of the City Plan, the designation allows the Transport Agency:

> “to control, manage and improve the state highway network including planning, design, research, construction and maintenance relating to all land within the designation. Such activities may also involve, but not necessarily be limited to, realigning the road, altering its physical configuration, culverts, bridges and associated protection works. The appropriate resource consents under the Resource Management Act 1991 will be applied for where required.”

The existing SH1 designation is not subject to any conditions.

### 2.4 Resource Consents Required

It is likely resource consent will be required from CCC under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (the NES) for the disturbance and excavation of potentially contaminated land. This is related to the use of part of the railway land to be added to the State Highway 1 designation. Resource consents are also likely to be required from Environment Canterbury for the discharge of stormwater and the excavation of potentially contaminated land, as well as for earthworks for the road construction. These approvals will be sought in due course, and preliminary discussions with CCC regulatory staff has confirmed that it is appropriate to seek the necessary consents once the respective Notices of Requirement have been confirmed.

### 2.5 Other Approvals

The portion of Barters Road that presently crosses the rail line will be closed to vehicular, pedestrian and cycle traffic. Any road stopping required will be subject to the Local Government Act processes.

Part 8 of the RMA provides for designations as a means of giving effect to a requirement for a public work made by a Requiring Authority. There are two Requiring Authorities associated with this project, being the Transport Agency and CCC.

A new designation is the preferred option for the construction of the proposed Pound Road / Waterloo Road intersection and the realignment of the approaches to this intersection. CCC is the requiring authority for this work. Sections 168A to 179 of the RMA provide the regulatory framework for Notices of Requirement advanced by territorial authorities.

The Transport Agency is required to alter its existing designation over SH1 in Templeton in order to accommodate the new Pound Road / SH1 intersection and SH1’s approaches to this intersection. Section 181 of the RMA sets out the process for the alteration of an existing designation, noting that it is to be treated as if it were a requirement for a new designation.

3.1 Notice of Requirement

Section 168A of the RMA provides for a territorial authority (in this instance CCC) to issue a notice of requirement for a designation provided that the work is located within its district and it has financial responsibility for the work, or a restriction is necessary for the safe and efficient functioning or operation of a public work and section 168A(1) states:

1. This section applies if a territorial authority decides to issue a notice of requirement for a designation—
   (a) for a public work within its district and for which it has financial responsibility; or
   (b) in respect of any land, water, subsoil, or airspace where a restriction is necessary for the safe or efficient functioning or operation of a public work.

In this instance, the CCC will have the financial responsibility for the designation. In regard to s168A(1)(b) the use of a designation as a means of authorising the works is discussed in Section 5 of this AEE.

Section 168A(1A) addresses public notification of the Notice of Requirement, establishing that the process is the same as for resource consent applications. S168A(3) sets out the matters the territorial authority must have regard to when considering, subject to Part 2, the effects on the environment of allowing the activity, including:

(a) any relevant provisions of—
   (i) a national policy statement;
   (ii) a New Zealand coastal policy statement;
   (iii) a regional policy statement or proposed regional policy statement;
   (iv) a plan or proposed plan; and
(b) whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if—
   (i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or
   (ii) it is likely that the work will have a significant adverse effect on the environment; and
(c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and
(d) any other matter the territorial authority considers reasonably necessary in order to make a decision on the requirement.

These matters are addressed in this AEE. Following the assessment of the Notice of Requirement, pursuant to section 168A(4), the territorial authority may decide to confirm, modify or withdraw the requirement or impose conditions. The decision must be served on any person who made a submission and land owners / occupiers directly affected by the decision, and may be appealed by any party who made a submission. Once any appeals have been resolved, the designation is then incorporated into the plan.

3.2 Alteration of Designation

Section 181 of the RMA allows requiring authorities (in this instance the Transport Agency) to alter an existing designation. Section 181 states:

(1) A requiring authority that is responsible for a designation may at any time give notice to the territorial authority of its requirement to alter the designation.
(2) Subject to subsection (3), sections 168 to 179 shall, with all necessary modifications, apply to a requirement referred to in subsection (1) as if it were a requirement for a new designation.
(3) A territorial authority may at any time alter a designation in its district plan or a requirement in its proposed district plan if—
   (a) The alteration—
      (i) Involves no more than a minor change to the effects on the environment associated with the use or proposed use of land or any water concerned; or
      (ii) Involves only minor changes or adjustments to the boundaries of the designation or requirement; and
   (b) Written notice of the proposed alteration has been given to every owner or occupier of the land directly affected and those owners or occupiers agree with the alteration; and
   (c) Both the territorial authority and the requiring authority agree with the alteration— and sections 168 to 179 shall not apply to any such alteration.
(4) This section shall apply, with all necessary modifications, to a requirement by a territorial authority to alter its own designation or requirement within its own district.

The Transport Agency is the requiring authority for the state highway network, including the portion of SH1 affected by the proposed works. The Transport Agency is able to use the provisions of section 181 of the RMA to alter the existing SH1 designation for which it is responsible. Notwithstanding that the proposed alteration involves only a minor adjustment to the boundaries of the existing designation, the Transport Agency considers that as this alteration is being sought in conjunction with the CCC’s Notice of Requirement, and is integral to the overall roading changes in this area, it is appropriate that the two components be subject to the same statutory process and considered at the same time.

As the two processes are likely to proceed through the public process, the Transport Agency has not sought written approval from the directly affected land owners / occupiers, and neither have they sought agreement from CCC (as the territorial authority) for the alteration. Sections 168 to 179 of the RMA apply as if the requirement to alter the existing designation was for a new designation, and the Transport Agency anticipates that any concerns from these parties will be raised through the statutory process.
3.3 Outline Plan

Section 176A of the RMA requires that prior to a project being constructed on designated land, an outline plan for the work must be submitted by the requiring authority (the Transport Agency and CCC) to the territorial authority (CCC) to allow the territorial authority to request changes. The requirements of an outline plan are set out within section 176A(3) of the RMA.

As the matters set out in section 176A(3) have been addressed within Section 6 this AEE, it is our opinion that section 176A(2)(b) is satisfied and a separate outline plan is not required. As part of this process, the Requiring Authorities request that the Council confirms that a further Outline Plan approval is not required.

3.4 Land Subject to Existing Designation

Section 177 of the RMA provides for designations over land which is already subject to an existing designation or heritage order and states:

(1) Subject to sections 9(2) and 11 to 15, where a designation is included in a district plan, and the land that is the subject of the designation is already the subject of an earlier designation or heritage order,—
   (a) the requiring authority responsible for the later designation may do anything that is in accordance with that designation only if that authority has first obtained the written consent of the authority responsible for the earlier designation or order; and
   (b) the authority responsible for the earlier designation or order may, notwithstanding section 176(1)(b) and without obtaining the prior written consent of the later requiring authority, do anything that is in accordance with the earlier designation or order.

(2) The authority responsible for the earlier designation or order may withhold its consent under subsection (1) only if that authority is satisfied—
   (a) that, in the case of an earlier designation, the thing to be done would prevent or hinder the public work or project or work to which the designation relates; or
   (b) that in the case of an earlier heritage order, the thing to be done would wholly or partly nullify the effect of the order.

CCC’s proposed designation will extend over KiwiRail’s existing designation for the Main South Line (MSL). CCC, as the Requiring Authority for the later designation, must obtain KiwiRail’s written consent prior to undertaking any construction works within KiwiRail’s designation. KiwiRail does not require CCC’s consent for works within their designation. CCC and the Transport Agency have been liaising with KiwiRail and will obtain KiwiRail’s written approval prior to works being undertaken.
4 Description of the Existing Environment

The project area is located to the west of Templeton, and falls within the boundaries of both Christchurch City Council (CCC) and Selwyn District Council (SDC). The location and extent of the project and the territorial boundary, which extends down the centre line of Marshs Road and Waterloo Road is illustrated in Figure 2 below.

Figure 2: Project Area showing Christchurch City Council and Selwyn District Council Boundaries

4.1 Land Use and Zoning

This stretch of SH1 is bordered by a mix of commercial and residential development on both sides of the road. Dwellings extend part way down Marshs Road and there are several houses on Waterloo Road, Pound Road and Barters Road. The remainder of the surrounding area is generally rural in nature. There are no schools, preschools or health care facilities within or immediately adjacent to the project area, although a Tavern is located adjacent directly to the east of the new intersection.

Christchurch City Plan

In general, land to the south of Waterloo Road is zoned Rural 2 (Templeton/Halswell) Zone. The primary purpose of the zone is to provide for continued primary production south and west of the city.

Between Pound Road and Waterloo Road is an area recently zoned Business 8 (Islington Park) Zone. This area was previously zoned Rural 2 but was rezoned to Business 8 by Plan Change 19, with construction of industrial development commencing on-site in 2013. The Business 8 Zone seeks to provide for general...
business activities including commercial premises, warehouses, offices and similar activities. Islington Park Ltd is the developer behind the Plan Change.

To the north of Waterloo Road and west of Pound Road is an area zoned Rural 5 (Airport Influences) Zone. The zone’s purpose is primarily the continuation of primary production while managing land use activities to avoid compromising airport operations and development.

SH1 itself is designated for “road” purposes with an underlying zoning of Special Purpose (Road) Zone. The designation width is typically 20 – 30m. Other roads in the project area are not designated but are contained within the Special Purpose (Road) Zone. KiwiRail’s Main South Line (MSL) runs parallel to Waterloo Road and is designated for “railway” purposes with an underlying zoning of Special Purpose (Rail) Zone. The shops on the south–eastern corner of the Barters Road / SH1 intersection are zoned Business 1. A scheduled activity exists on the northern side of SH1, being a petrol station.

Figure 3 is an excerpt taken from Planning Map 43A of the City Plan, illustrating the surrounding zoning.

Figure 3: Excerpt from Planning Map 43A of the City Plan

Selwyn District Plan

The area to the south of Waterloo Road and west of Marshs Road is located within the boundary of Selwyn District Council and is zoned Inner Plains.
Although a portion of the project area lies within Selwyn District, the forming, installation, upgrading, maintenance or replacement of roading within Selwyn District is a permitted activity and does not require authorisation through either a resource consent or an Outline Plan/Notice of Requirement process.

4.2 Transport Network

**State Highway 1 (Main South Road)**

SH1 through Templeton is a two lane road with a flush median and a posted 70kph speed restriction. The road runs roughly northeast to southwest and is parallel to KiwiRail’s Main South Line. There is a wide shoulder on the southern side of the road which is presently used for parking. Nineteen angle car parking spaces are provided on the southeast corner of the SH1 / Barters Road intersection. The City Plan identifies SH1 as a major arterial and a Limited Access Road in the project area. The City Plan identifies the purposes of major arterial roads as connecting the major localities of the region, both within and beyond the main urban area, and linking to the most important external localities. SH1 is a nationally significant road that links Christchurch to other main urban settlements, such as Dunedin to the south and Picton to the north and its associated ferry link to the North Island.

There is a footpath on the southern side of SH1 that extends from the northeast until the Barters Road intersection. The footpath on the northern side of the road extends from the southwest until the Barters Road intersection. There are no pedestrian crossing facilities over SH1 within the project area.

There are numerous existing access ways connecting adjoining properties to SH1. On the south side of SH1 the access ways are to residential properties while the access ways along the north side of SH1 are to residential and commercial properties.

**Waterloo Road**

Waterloo Road is a two lane road running parallel to SH1 on the northern side of the Main South Line. Waterloo Road has a speed restriction of 100 kilometres per hour (kph) which is reduced to 80kph at the Waterloo Road / Barters Road intersection. There are no footpaths provided on Waterloo Road.

There are two bus stops on Waterloo Road (on either side of the Barters Road / Waterloo Road intersection) for the Selwyn Star Route 88 bus between Rolleston and Christchurch City. This is the only bus route from Templeton to the City and no changes are anticipated to this at the time of writing this report.

Waterloo Road is used by heavy commercial vehicles travelling between Hornby and the Rolleston I-Zone. The section of Waterloo Road from Pound Road to Barters Road is classified as a minor arterial in the City Plan, but a collector road beyond this section. Minor arterial roads provide the connections between major arterial roads and inter-connect the major rural, suburban, commercial and industrial areas. Collector roads distribute and collect local traffic within and between neighbourhoods and link rural communities. They link to the arterial network and act as local spine roads and often as bus routes within neighbourhoods.

There is one existing residential access way within the project area, providing access to the property located immediately east of the Waterloo Road / Barters Road intersection.

**Barters Road**
Barters Road is a two lane road running north to south between Quarry Road and SH1. Barters Road has an 80kph speed restriction and a restriction preventing light vehicles (under 3500kgs) from using this road between 10pm and 5am to minimise antisocial behaviour. Barters Road is classified as a minor arterial in the City Plan and does not provide footpaths.

Barters Road crosses the MSL approximately 90m north of the SH1 / Barters Road intersection. This crossing is barrier controlled.

The section of Barters Road between SH1 and Waterloo Road currently has three access ways to commercial properties.

**Pound Road**

Pound Road is a two lane road running northeast to southwest, linking the Templeton area to Yaldhurst and the Christchurch International Airport. Pound Road has a 100kph speed restriction and is classified as a minor arterial in the City Plan. There are no footpaths on Pound Road.

There are two existing residential access ways within the project area, one of which is located immediately north of the Waterloo Road / Pound Road intersection, and the other on the north side of Pound Road at CH450.

**Marshs Road**

Marshs Road is a two lane road that provides a link between Templeton and Prebbleton. Marshs Road has a 70kph speed restriction and has footpaths and kerbside parking on both sides of the road. Residential access ways are provided on both sides of Marshs Road.

**4.3 Stormwater Network**

Within the existing road reserve areas, stormwater runs off the paved surfaces to adjacent grassed berms and soaks away to groundwater. There is no existing drainage infrastructure or formalised treatment of stormwater run-off from Waterloo Road, Pound Road or Barters Road. The Barters Road drain, along the western side of Barters Road, is the only formalised stormwater drainage in the immediate area.

Existing kerb and channel is located along the south side of SH1, which directs stormwater run-off from the carriageway to catchpits located at regular intervals. CCC records indicate that the catchpits flow to soakage pits which drain to groundwater. There is no kerb and channel along the north side of SH1, and stormwater run-off from the carriageway drains directly into a shallow roadside drain which conveys water to soakage pits located at irregular intervals within the drain.

**4.4 Topography and Soils**

The project area is generally flat and lies in the Canterbury Plains. Environment Canterbury’s online GIS identifies that the soil type is Waimakariri deep, well drained, silty loam. Geotechnical investigations indicated that the ground stratus is 0.3m topsoil, 2m silty sand, overlying a deep layer of sandy gravel. The silty sand is likely to have poor permeability.

Environment Canterbury’s online GIS identifies that this area is located above an unconfined or semi confined aquifer, with a depth to groundwater of more than six metres. Piezometric contours indicate that
groundwater generally flows in a northwest to southwest direction. The nearest down gradient community supply wells are in excess of 2km from the project area.

The site of the former Islington freezing works is located within the project area, bound by Pound Road and Waterloo Road. This site is associated with a number of HAIL activities (storage tanks or drums for fuel, chemicals or liquid waste; and landfill sites), and the site is listed on Environment Canterbury’s Listed Land Use Register as ‘Not Categorised’. Accordingly, resource consent may be required under National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health prior to the commencement of works to give effect to the designation.

4.5 Ecology

In terms of surface water, the Barters Road drain runs parallel to Barters Road on the road’s western side before flowing under the MSL and Waterloo Road via a small culvert. The open drain continues for a short distance before entering another culvert under SH1. The ecological value of this drain is considered to be relatively low.

There are no known flooding problems in the area and there are no identified flood management or ponding areas in the City Plan that affect the project area.

There are no listed conservation areas in the project area, such as:

- Wetlands of regional significance;
- Significant vegetation of Canterbury water bodies;
- Sites of special wildlife importance;
- Recommended areas of protection; or
- River and open water habitats for indigenous birds.

4.6 Archaeology, Cultural and Heritage

The project area is within the boundaries of Te Ngāi Tūāhuriri Rūnanga, and to a lesser extent Te Taumutu Rūnanga. There are no silent files or Ngai Tahu Treaty Settlement Areas in the vicinity of the project, according to Environment Canterbury’s online GIS.

The City Plan does not identify any protected objects, places or buildings and there are no registered historic places under the NZ Historic Places Act in proximity to the project area.

The Transport Agency has a Cultural Heritage Risk Model that identifies recorded archaeological, cultural and historic heritage sites in proximity to SH1, and identifies risk zones where there is a high probability of encountering unrecorded archaeological and cultural heritage. The model shows low risk within this project area location in terms of consulting with Historic Places Trust and Ngai Tahu.

4.7 Community

As identified earlier, the stretch of SH1 between Barter’s Road and the new Pound Road is bordered by a mix of commercial and residential development on both sides of the road. Dwellings extend part way down Marshs Road and there are several houses on Waterloo Road, Pound Road and Barters Road. The remainder of the surrounding area is generally rural in nature.
There are no schools, preschools or health care facilities within or immediately adjacent to the project area. The existing Barter’s Road intersection is immediately adjacent to a small commercial area, and a number of shops have parking outside on the roadway directly in front of their premises. Further to the east are a number of residential properties. The new intersection to be created joins the State Highway to the west of an existing Tavern.
5 Description of Project

5.1 Overview
The Main South Road and Barters Road Intersection Upgrade Project seeks to improve the Main South Road / Barters Road / Marshs Road intersection and the linkage from Pound Road to SH1. Specifically, the project aims to:

- Improve the current safety and efficiency issues for traffic at the Barters Road and Marshs Road access onto SH1;
- Provide for the short to medium term travel demands created from future use of the Pound Road bypass (for traffic to bypass Hornby);
- Improve connectivity and safety for cyclists and pedestrians;
- Provide a safer and more efficient relocated railway crossing for motorised transport; and
- Enable access to the PC19 development.

The project consists of the following three components:

- **Local Road Component.** The realignment of Pound Road and Waterloo Road to create a new signal controlled crossroads intersection to the northeast of the existing intersection and closure of the Barters Road rail crossing. The old portions of Waterloo Road (Waterloo Road to the east of the existing intersection with Pound Road) and Pound Road (between Waterloo Road and the new Pound Road alignment) will effectively be closed. The future of these portions of road will be determined in consultation with CCC at the detailed design phase. A portion of the old Pound Road alignment may be required to provide access to private property. Although it is not the Requiring Authority for this work, the Transport Agency will construct the realigned roads and the new intersection but CCC will retain ownership and be responsible for the on-going operation and maintenance. CCC requires a new designation to authorise these works. Once the roads have been constructed they will be included within the Special Purpose (Road) Zone and the designation will be uplifted.

- **State Highway Component.** A new Pound Road / SH1 traffic signalised intersection with widening of the SH1 carriageway and minor changes to the SH1 layout on the approaches to this intersection. The Transport Agency will be responsible for the construction, operation and maintenance of this intersection. The Transport Agency will require an alteration to the existing SH1 designation to authorise these works.

- **Permitted Component not requiring a new designation or alteration.** Creation of a ‘T’ intersection at Waterloo Road / Barters Road, closing the rail crossing and creating a cul-de-sac on the southern portion of Barters Road between SH1 and the rail crossing under the Local Government Act road closing/stopping procedures. These works span the CCC and SDC boundary. The portion of work within the Christchurch City Council boundaries is contained within the Special Purpose (Road) Zone and can therefore be undertaken without the requirement for resource consent or a designation from CCC. The portion of work within the Selwyn District Council boundary is within the existing State Highway designation and it is therefore anticipated that this work can be permitted through the Outline Plan approval process, if necessary.

These components are shown in Figure 4 below. While the proposed works form a single project under the RMA, the respective components delivered by the Transport Agency and CCC are separate in terms of legal and statutory responsibility, hence the necessity for the two Notices of Requirement to which this AEE relates. The two components are shown in the plan below. The designation that will become the
CCC designation for roading purposes also includes an area that is to be dedicated to the capture and attenuation of stormwater from the new road, and this area is also shown on the Plan below.

Key: Orange Roads are CCC/SDC roads. 
Blue Road is State Highway 1 (NZ Transport Agency)

Figure 4: Project Overview Showing Local Road and State Highway Components

5.2 Design Philosophy

The Geometric design is to be based on the following standards:

- NZTA State Highway Geometric Design Manual (Draft)
- Austroads suite of road design standards
- Christchurch City Council (CCC) Construction Standard Specification

A design speed of 70 km/h will be adopted for this assessment for all roads and intersections to create a consistent speed environment and to take into account the possibility of future development in the area. Waterloo Road will become a 50km/h speed zone due to the adjacent PC19 development.

5.3 Land Requirements

In total 30,902m² of additional land is required to enable to the project. The following table summarises the land requirements and should be read in conjunction with the plans attached as Appendix C. The Certificates of Title for the following land parcels are contained in Appendix D.
<table>
<thead>
<tr>
<th>Property No.</th>
<th>Legal Description</th>
<th>Owner / Occupier</th>
<th>Area Required (m²)</th>
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<td></td>
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<tr>
<td>21</td>
<td>Lot 1 Deposited Plan 46160</td>
<td>Islington Tavern Limited et al</td>
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<tr>
<td>22</td>
<td>Lot 4 Deposited Plan 20302</td>
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<td>1222</td>
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<td>Deed of Grant</td>
<td>1018 (note not to be acquired – approval of KiwiRail required to cross over rail designation)</td>
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<td>Part Rural Section 1983</td>
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<td>85</td>
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<td>State Highway Component – Alteration to Existing Designation</td>
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<td></td>
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<td>1</td>
<td>Lot 2 DP 19330</td>
<td>Arthur Bruce Ackroyd and Doreen May Ackroyd</td>
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<td>78</td>
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</table>
5.4 Road Layout and Intersection Configuration

Pound Road and Waterloo Road will be realigned to create a new traffic signal controlled crossroads intersection 300m to northeast of the existing intersection. A new rail crossing will be constructed on Pound Road, 400m east of the existing Barters Road crossing. Areas of existing paved surface along Pound Road and Waterloo Road will be removed and grassed, while some sections of existing paving will be retained for private access and services. A new Pound Road / SH1 intersection will be constructed. This will be a signalised ‘T’ intersection immediately to the west of the Islington Tavern site. SH1 will be widened and lane configuration changes will be required on the SH1 approaches to the new intersection.

The Barters Road rail crossing will be closed to traffic, making the Barters Road / Waterloo Road intersection a ‘T’ intersection with priority given to Waterloo Road. The SH1 / Marshs Road / Barters Road intersection will remain largely unchanged; however the portion of Barters Road south of the railway will become a cul-de-sac and the SH1 right turn bay into Barters Road will be marked as a flush median only. Closure of the Barters Road rail crossing, and the corresponding creation of a Barters Road cul-de-sac and Barters Road / Waterloo Road ‘T’ intersection are contained entirely within the Special Purpose (Road) Zone and can be undertaken as permitted activities in accordance with the City Plan. As these components of the project do not require approval from CCC, they are not included within the Notices of Requirement associated with this AEE and have not been discussed further.

The plans attached as Appendix B of the Scheme Assessment Addendum Report show the road and intersection layout.

Footpaths

Footpaths will be provided on both sides of SH1 within the project area, and on the southern side of Waterloo Road and the eastern side of Pound Road, providing a link between Waterloo Road and Main South Road. It is anticipated that the footpaths will be 2.5m wide shared paths.

A new pedestrian crossing will be provided at the proposed SH1 / Pound Road intersection.

Services

- Existing services which will potentially be affected by the new alignment include overhead power lines, fibre optic communication cables, water mains and wastewater infrastructure including a pumping station. Service relocation plans are provided in Appendix S of the Scheme Assessment Report. Waterloo Road services will remain in the existing road corridor. The new sewer main along the proposed Waterloo Road realignment is a CCC responsibility and cost. Bus stops are to be provided within the PC19 land.

5.5 Access and Parking

A number of accessways to existing properties within the project area will be affected by the works, as shown in Appendix E. The plan attached as Appendix E is to be read in conjunction with the descriptions below.

SH1

A number of properties will be directly affected by the creation of the proposed signalised SH1 / Pound Road intersection.
On the south side of SH1, it is anticipated that six residential properties (A) will be directly affected by the intersection and these accessways will be required to be made left-in left-out only. It is anticipated that another eight residential properties (B) will require new vehicle crossings to be constructed to allow for the new kerb and channel alignment.

On the north side of SH1, there are two residential properties (C) directly affected by the intersection and these accessways will be required to be made left-in left-out only. Another two residential properties (D) will require new vehicle crossings to be constructed to allow for the new kerb and channel alignment. One commercial property, the Islington Tavern, will have part of the property frontage removed to accommodate the new intersection (E). This frontage currently provides access to the existing car parking area. A new access will be constructed to the Islington Tavern (F), indicatively 60m north of the new SH1 / Pound Road intersection.

**Pound Road**

The two existing residential accessways (G) on Pound Road within the project area will be retained and upgraded to current Transport Agency standards. Two gateways (H) that provide access to paddocks on the north side of Waterloo Road will be relocated to an appropriate point along the new Pound Road alignment.

**Waterloo Road**

The one existing residential accessway (I) along Waterloo Road is located immediately east of the Waterloo Road / Barters Road intersection. This accessway will be retained and upgraded to current Transport Agency standards.

Any incidental accessways, such as paddock access, will be appropriately modified or treated to allow continued access and traffic safety.

### 5.6 Earthworks

Land disturbance activities will be required for the construction of the proposed Pound Road / Waterloo Road intersection, the widening of SH1 and the stormwater basins. These works will involve stripping of topsoil and minor cut and fill activities to create the new road alignment. Where necessary, topsoil and grass will be stripped from required areas using heavy machinery including bulldozers and excavators. The topsoil will be stored on site for reuse in landscaping and ground stabilisation, with excess material removed from site to an appropriate facility.

The flat topography of the site minimises the extent of earthworks required for the construction of the new Pound Road / Waterloo Road realignment. The most significant cuts will be required in forming the stormwater basin due to the varying depths of existing silt material that will require excavation. It is anticipated that these cut depths could range from 2m to 5m before suitable gravels for soakage is encountered. These silt excavations will then be backfilled with suitable free draining gravels. Additional geotechnical investigations at detailed design phase will determine these cut depths with more accuracy. Minor cuts will be required to construct the swale at the basin inlet and pavement. A fill embankment, less than a metre high, will be required to raise the level of Pound Road to the same as the rail level, to enable the construction of the new rail crossing.

It is projected that the proposed works will involve the excavation and filling of approximately 20,000m$^3$ of earthworks for the construction of the Pound Road / Waterloo Road intersection, widening of SH1 and...
installation of the drainage system. An area of approximately 50,000m² (5.0ha) will be disturbed during construction of the project.

Due to the minor nature of the earthworks operation no Erosion and Sediment Control Plan (ESCP) has been prepared as part of this Notice of Requirement. However, an ESCP will be required prior to the construction of the new roads and stormwater basins. Any necessary consents required for the excavations from Environment Canterbury will be sought at the appropriate stage thorough the detailed design process once the final design and details of excavations are determined.

The earthworks will be undertaken in stages to ensure that the area of disturbed land does not exceed two hectares at any one time.

5.7 Stormwater

Stormwater from the new Pound Road and Waterloo Road intersection and the approaches to this intersection will be managed through the construction of a roadside drainage system that includes kerb and channel for the full extent of the scheme, catchpits, and pipes to a stormwater basin system. The stormwater basin system will provide treatment and discharge to groundwater via soakage as agreed with CCC. This proposed stormwater system is described in the report prepared by Beca Infrastructure Ltd, SH1 Barters Road 1&R: Scheme Assessment Addendum Report November 2013, attached as Appendix B. This revised stormwater system was developed to meet CCC’s requirements that the stormwater management strategy was consistent with the adjacent PC19 development, and in light of the narrowed available road footprint which would not accommodate swales.

The revised design includes the following elements:

- Kerb and channel, catchpits and pipework, to convey stormwater to the basin, sized for the 2% AEP event. While the CCC standard is for the primary system to be designed to convey the 20% AEP and the secondary system to convey the 2% AEP, the relatively flat nature of the site the vertical alignment the road does not allow secondary flow to be directed to the basin, and therefore the pipe system has been designed to collect and convey the 2% AEP event.

- A short length of swale at the basin inlet to provide pre-treatment. (CCC has advised that it requires a 30m to 50m length of swale prior to the first flush basin.)

- A flow splitter to direct first flush stormwater to the first flush basin and divert water to the attenuation basin once the first flush basin is full.

- A first flush infiltration basin to provide treatment, discharging to soakage. This is sized to treat the runoff volume from impervious surfaces from a 25mm first flush rainfall.

- An attenuation basin to provide storage and discharge to soakage, as shown on the Plan in the above section. This pond is only to capture run off from the road, and is sized to provide storage and discharge via soakage up to the 2% AEP critical duration event. In this context, the critical duration event is the duration which, allowing for soakage, gives the largest storage volume.

It has been assumed that only the sealed area drains to the stormwater system in sizing the reticulation and basins, as the proposed road alignment generally sits just above the existing ground level. The
grassed areas within the designation will continue to drain overland and discharge to ground as they currently do.

As identified in the original stormwater proposal the surface and shallow soils in the project area are silts and silty sands, with low soakage rates. The geotechnical investigations\(^1\) included soakage investigations which confirmed the above, and also identified gravels underlying these silts and sands, at vary depths in the order of 2m to 5m. These gravels are likely to be suitable for soakage disposal, however the depth to gravel at the basin site is not known and no soakage testing has been carried out in these gravels.

In order to confirm that there is sufficient space within the basin site and to arrive at provisional basin sizes and layout, a range of soakage arrangements and soakage rates (from 12.5mm/hour to 100mm/hour) have been considered. The basin sizes shown on the drawings are based on a soakage rate of 50mm/hour with soakage through the base of the basins (i.e. material below basin excavated to gravels and replaced with free draining material). This gives a first flush basin with a volume of 530m\(^3\) and an attenuation basin with a volume of 1900m\(^3\).

### 5.8 Landscaping

An indicative landscape planting plan has been prepared for the local road component of the project and is included in Appendix AC of the Scheme Assessment Report. No landscaping is proposed for the State Highway component of the project, as it is an existing road corridor. The proposed planting scheme focuses on integrating the local road carriageway into the rural setting and providing a level of amenity for future road users (e.g. drivers, cyclists and pedestrians).

The proposed planting scheme includes large grade tree planting on both sides of Pound Road (Scarlet Oaks) to reinforce priority movement and to establish a gateway character for vehicles approaching the new Pound Road/ SH1 intersection. The trees will also reduce headlight glare and provide potential screening of future commercial/ industrial development to the east of the proposed intersection. Any future development of this adjoining land will require boundary setbacks and associated landscaping that will be sympathetic with the proposed planting.

A double row of large grade Cypress Oaks will be planted on both sides of Waterloo Road in the same manner as Pound Road with the variation in tree type maintaining a gateway characteristic, albeit to a lesser degree. The double row of trees will also provide additional screening of headlight glare.

The indicative landscape planting plan includes the planting of low growing vegetation (New Zealand Iris) along the margins of carriageway adjacent to the proposed footpaths that provide for off-road cycle and pedestrian movement. A 2.5m wide services strip remains along Waterloo Road, and it is anticipated that this can be grassed and appropriate low level planting with shallow root systems can be included in the design. It is proposed that the planting of trees along Pound Road will complement the requirements of the Plan Change 19 provisions. The selected plant species are low maintenance, hardy, and are located to ensure compliance with vehicle sightline requirements and to ensure that visibility of both pedestrians and cyclists at key crossing points is maintained.

\(^1\) Beca, SH1 Barters Rd I & R – Geotechnical Factual Report, August 2011

Beca, SH1 Barters Road Investigation and Reporting – Interpretive Geotechnical Report – Revision 1, August 2011.
6 Consideration of Alternatives

Sections 168A(3)(b) and 171(1)(b) of the Act require that particular regard be given to whether adequate consideration has been given to alternative sites routes or methods of undertaking the work if the Requiring Authority either (i) does not have an interest in the land sufficient to undertake the work, or (ii) it is likely that the proposed work will have a significant adverse effect on the environment.

Presently the Requiring Authorities do not have an interest in the land sufficient to enable the works to be undertaken. In that respect, the process of considering alternatives is relevant.

As part of the assessment of alternative options, Beca Infrastructure Ltd has undertaken an options assessment within the Scheme Assessment Report to determine the most appropriate means of addressing the project objectives. This report is attached as Appendix A. Four options were identified and as well as a ‘do-minimum’ option. Full plans of the options considered are contained within the appendices of the Scheme Assessment Report.

Do-Minimum

The ‘do-minimum’ option involves minor upgrades the existing road network layout.

6.1 Option 1

Option 1, shown in Figure 5, includes the signalisation of the SH1 / Barters Road / Marshs Road intersection. Vehicle stacking will be available to the rail crossing and beyond (if required) with the possibility of a priority change of the Barters Road / Waterloo Road intersection. There will be a change of priority at the Waterloo Road / Pound Road intersection to give Pound Road the priority, which will help strengthen the use of this route as a bypass of Hornby Junction. The signalisation of SH1 / Barters Road / Marshs Road intersection will include a pedestrian crossing but will result in a reduction of car parking at the shop frontage on the southeast corner of this intersection.

This option requires the least amount of land take, with only Pound Road and Waterloo Road being realigned for the new Waterloo Road / Pound Road intersection. Some land may be required for stormwater treatment and lane widening.
6.2 Option 2

Option 2, shown in Figure 6, includes the signalisation of the SH1 / Barters Road / Marshs Road intersection and the associated loss of car parking at the shop frontages on the southeast corner of this intersection. Pound Road will be realigned to the north so as to directly tie into Barters Road, with Barters Road and Waterloo Road being realigned to intersect the realigned Pound Road as a staggered “T” intersection. Pound Road would take priority over both Waterloo Road and Barters Road improving the use of this route as a bypass of Hornby Junction over that of Option 1.
6.3 Option 3

Option 3, shown in Figure 7, includes the signalisation of the SH1 / Barters Road / Marshs Road intersection and the associated loss of car parking at the shop frontages on the southeast corner of this intersection. Pound Road will be realigned to the north so as to directly tie into Barters Road. Barters Road will be realigned to intersect the realigned Pound Road with a 70 degree “T” intersection. The existing Barters Road / Waterloo Road intersection will be relocated north along Barters Road with Waterloo Road being realigned north with reverse curves on both sides. This will provide for unobstructed stacking length beyond the rail crossing for traffic approaching the SH1 intersection. The realigned Pound Road would take priority over both Waterloo Road and Barters Road, which will improve the use of this route as a bypass of Hornby Junction over that of Option 1.

This option requires more extensive land area to accommodate the realigned roads and relocated intersections.
6.4 Option 4

Option 4, shown in Figure 8, includes the closure of the Barters Road rail crossing with the existing SH1 / Barters Road / Marshs Road intersection. The Barters Road / Waterloo Road intersection would therefore become a "T" intersection with a change in priority to give Waterloo Road priority. Pound Road will be realigned to the east and will intersect the realigned Waterloo Road and will then intersect the railway at a new rail crossing before intersecting with SH1 with a new signalised "T" intersection. The existing Pound Road / Waterloo Road intersection will be closed to through–traffic and potentially left open for private access.

The Option 4 alignment was subject to two assessments (referred to as Option 4a and Option 4b). The two assessments had the same alignment but were based on different cost scenarios, with Option 4a assuming a cost sharing agreement could be reached with the developers of the land subject to Plan Change 19, while Option 4b assumes no such agreement could be reached.
6.5 Amended Option 4

Subsequent to the SAR, the Option 4 alignment was amended to align with the approved layout for Plan Change 19 along Waterloo Road. The amended Option 4, which is the subject of this Notice of Requirement, is shown in Figure 9. The key change included the amended Option 4 alignment (Figure 9) compared to the original Option 4 alignment (Figure 8) is that Waterloo Road has been straightened at the eastern arm to align with the PC19 development, which was approved subsequent to the development of Option 4. Some minor changes on the western alignment were also required to be consistent with the PC19 layout. The Pound Road alignment has not altered from that originally proposed in Option 4 in the SAR.
6.6 Evaluation

The four options were evaluated against the 'do-minimum' based on a number of criteria. The following table provides a summary of the results of the evaluation process. The evaluation process is set out in detail in the Scheme Assessment Report. The Option 4 alignment was subject to two assessments (referred to as Option 4a and Option 4b). The two assessments were based on different cost scenarios, with Option 4a assuming a cost sharing agreement could be reached with the developers of the land subject to Plan Change 19, while Option 4b assumes no such agreement could be reached.
After considering this range of matters, the Option 4 alignment emerged overall as the preferred option. Since the SAR was completed the development of the land subject to Plan Change 19 has been advanced and Option 4 was subsequently amended to be compatible with the Plan Change 19 roading pattern. The amended Option 4 alignment is not considered to be materially different to the evaluations of Option 4a and Option 4b above against the listed criteria, and is therefore the option put forward and assessed in this Notice of Requirement.

6.7 Alternative Statutory Approval Methods

Resource Consent pursuant to Part 6 of the Act

The works could be authorised through resource consents from the CCC. However resource consents will not provide:

- Flexibility, as changes to design may require going through the consenting process again; and
- Sufficient certainty of outcome for project planning purposes – changes to design through the outline plan process provide a higher certainty of outcome as opposed to reliance upon the discretionary regime associated with a variation to a resource consent; and
- Consistency with standard road controlling authority practice.

Plan Change pursuant to the First Schedule of the Act

The CCC could seek a Plan Change to the City Plan to rezone the required land (that is not yet Special Purpose Road zone) as Special Purpose (Road) Zone. Even if that land were to become Special Purpose Road Zone it is likely that resource consents would still be needed for the works under that zoning. Alternatively a Plan Change might seek to enable or ‘permit’ the construction of the works by way of rules (or exemption of rules for the works) in the City Plan. However the first schedule plan change process is complex, time consuming, costly and not suited to authorising the construction of network utilities such as these works.
Further, the works will become part of the Special Purpose Zone once they are constructed and the land they are on becomes legal road within the meaning contained in the Local Government Act 1974 (if not already legal road). In that respect the Plan Change process is unnecessary.

Designations and Notices of Requirement Pursuant to Part 8 of the Act

Parliament recognised the difficulties of providing for network utilities under the other procedures of the Act. Accordingly Parliament granted all territorial authorities requiring authority status (s 166 of the Act), and made the Notice of Requirement process available. Accordingly, and given the above, the Notice of Requirement option was chosen.
7 Assessment of Effects on the Environment

7.1 Positive Effects

The purpose of the project is to improve the safety and efficiency of the SH1 / Barters Road / Marshs Road intersection in Templeton and the linkage from Pound Road to SH1. Access from Marshs Road onto SH1 will be improved as there will be a large reduction in traffic from the Barters Road cul-de-sac onto SH1, and the new signalised SH1 / Pound Road intersection will create gaps in the traffic flow. The realignment of Pound Road and the new signalised Pound Road / SH1 intersection will facilitate the future use of the proposed Pound Road bypass. Pedestrian and cyclist connectivity will be improved through the construction of footpaths on both sides of SH1, the southern side of Waterloo Road and the eastern side of Pound Road (between Waterloo Road and SH1) with a new pedestrian crossing at the Pound Road / SH1 intersection. The creation of a new rail crossing on Pound Road will provide a greater separation of SH1 and the rail crossing and hence will provide increased queuing space.

Overall, the project is considered to address its key objectives and improve traffic and pedestrian safety and efficiency, as well as facilitating the future Pound Road bypass.

7.2 Construction Effects

There is the potential for temporary dust and noise effects resulting from the use of heavy plant and equipment during construction of the proposed works. Sedimentation and contaminant run-off may also occur during construction. These effects will be temporary in nature, occurring only during the construction period. An Environmental Management Plan (EMP) will be prepared by the appointed contractors prior to the commencement of construction. The temporary construction effects are discussed in more detail below.

Dust

The construction phase of the project has potential to cause the emission of dust into the immediate vicinity of the work area, which may affect passing motorists and adjacent landowners / occupiers. Sources of dust include machinery used on site and exposed earth surfaces. A Construction Dust Management Plan (CDMP) will be prepared as part of the EMP which will describe appropriate mitigation measures to be put in place to control dust emissions during construction. These methods may include:

- Watering to keep construction materials damp;
- Limiting vehicle / machinery speed within the construction area; and
- Avoiding stockpiling of dust generating materials.

Dust emissions will cease when construction works are completed and all roadside areas have been grassed or otherwise landscaped.

The potential adverse effects of dust will be limited to those properties located in relatively close proximity to the carriageway. Given that dust will be limited to the construction period only and that appropriate mitigation measures to be implemented through the CDMP, the adverse effects of dust on neighbouring properties will not be significant.

Noise
During construction the contractor will be required to meet the provisions of the New Zealand Standard for construction noise (NZS 6803:1991 Acoustics – Construction Noise). This standard identifies appropriate thresholds for noise from construction activities and, provided this standard is followed, any actual and potential noise effects will be within the limits anticipated by the standard, and will not give rise to any adverse effects on any party.

On-going (operational) noise effects are discussed in Section 7.4 of this AEE.

**Erosion and Sediment Control**

The contractor will be required to prepare an Erosion and Sediment Control Plan (ESCP) as part of the EMP. The general principles to be followed in reducing soil erosion, particle transport and sedimentation will be to:

- Divert clean water around the site.
- Keep onsite runoff velocity low.
- Retain sediment on site.
- Prevent dust nuisance through dampening exposed surfaces regularly.
- Inspect and maintain control measures.

Provided the ESCP is prepared and implemented in accordance with industry best practice approaches, the erosion and sediment control measures will be sufficient to avoid any potential adverse effects. There are no particular characteristics of the project area that would prevent standard approaches to the management of erosion and sediment control being successful.

**Traffic Management**

A Traffic Management Plan will be implemented during construction with standard controls in accordance with the Transport Agency’s ‘Code of Practice for Temporary Traffic Management’. This will be developed to minimise any delays and construction related hazards to road users.

**7.3 Traffic Safety and Efficiency Effects**

**Traffic Efficiency**

Traffic modelling has been undertaken for the proposed works comparing the ‘do minimum’ option (i.e. Option 1) to the ‘with project’ option (Option 4 alignment) for 2016 and 2026. The traffic modelling has included assessments both with and without the Christchurch Southern Motorway Stage 2 (CSM2). CSM2 provides an alternative route for traffic on SH1 in the vicinity of the Barters Road project area, and is expected to be completed around 2018. Including the traffic effects of CSM2 in the modelling for the Barters Road project significantly reduces the traffic flows on SH1 past Barters Road.

The following table summarises the operational performance from the traffic modelling of the four intersections directly affected by this project.
These results show that with the preferred project in place (Option 4 alignment), the local road network is expected to operate satisfactorily. The predicted very poor levels of service expected at some of the current intersections will be alleviated by this project. For vehicles on SH1, there will be a small increase in average travel times with the new signalised SH1 / Pound Road intersection. Without the project (the 'do minimum' situation), delays at some of the minor intersections are expected to keep increasing, even with CSM2.

The alternative routing provided by CSM2 is likely to result initially in a considerable reduction in traffic volumes on SH1, which by itself will improve the operational performance of some of the intersections affected by this project. However, this reduction in traffic volumes on SH1 with CSM2 will only be temporary, as forecast growth around the western and south-western side of Christchurch will push traffic volumes up again. Additionally, if CSM2 opens later than currently planned, the traffic volumes on SH1 will continue to rise from the current levels, resulting in increasing delays to non-SH1 traffic.

Overall, the project shows satisfactory levels of traffic efficiency, and it is considered that there will be no significant adverse effects on the efficiency of traffic moving through the new intersection or the wider roading network.

**Traffic Safety**

Crash history figures are discussed in the Scheme Assessment Report. In summary, there were 45 recorded crashes between 2005 and 2009, of which 17 caused injury. Two of the injuries were serious. Since the start of 2010 there have been an additional 43 reported crashes through to the end of 2013\(^2\). Of these, 21 crashes caused injury, with four of the crashes resulting in serious injuries.

\(^2\) Note that crash data for 2013 may be incomplete due to the time lag in updating the Crash Analysis System database.
Based on the crash modelling included in the Scheme Assessment Report, there is expected to be a benefit in terms of crash costs. Crash cost is derived from the predicted occurrence and severity of crashes. The results of the crash prediction identify that the crash rates are expected to vary with the project in place, but that overall there should be a net benefit to traffic safety in the project area.

The project includes measures to reduce the severity of crashes that occur within the study area, which are expected to reduce the number of fatal and serious crashes, although the frequency of non-injury crashes is anticipated to increase. The signals at the new SH1 / Pound Road “T” intersection and Pound Road / Waterloo Road cross-roads will be co-ordinated to minimise the potential for vehicles to queue across the railway. The increased separation of the new Waterloo Road intersection from the railway line will improve visibility and provide increased stacking capacity for vehicles queuing when the barrier arms are lowered across the road, which is anticipated to improve safety for at the intersection and the railway crossing for both road users and rail.

Furthermore, the new SH1 / Pound Road intersection will provide turning opportunities for traffic to/from SH1 that will be safer for those vehicles than the existing arrangement at the SH1 / Barters Road intersection. These signalised intersections may increase the occurrence of minor nose-to-tail crashes, but the overall effect is expected to reduce the number of serious and fatal turning crashes in the study area.

The SH1 / Barters Road / Marshs Road intersection will have reduced turning flows, which should reduce the occurrence of crashes at this location. The Waterloo Road / Barters Road intersections will operate as a priority controlled “T” intersection, an arrangement which is safer than the existing priority controlled cross-roads.

Pedestrian safety is likely to be improved by the project as a signalised crossing of SH1 will provided as part of the Pound Road / SH1 intersection.

### 7.4 Noise Effects


NZS 6806:2010 is the New Zealand Standard for assessing noise from traffic on public roads and applies to projects where new roads are constructed, or where there are major alterations to the existing road alignment. The standard assesses noise for Protected Premises and Facilities (PPFs), which typically include residential dwellings and educational facilities and exclude commercial activities. The only PPFs present within the project area are residential dwellings.

The standard requires that traffic noise be assessed at a particular design year that is between 10 and 20 years after the opening of the new / altered road. For the purposes of this project, the year 2026 has been selected as the design year for traffic modelling for this project. The standard compares the ‘do-nothing’ scenario with the ‘do–minimum’ scenario. The ‘do-nothing’ scenario is the situation at the design year (2026) assuming no alterations are made to the existing road. The ‘do–minimum’ scenario is the situation at the design year (2026) assuming the project is constructed without noise mitigation measures in place.
Marshall Day undertook a noise survey in the area on 7 May 2012 and the existing noise levels at dwellings were determined from these measurements. However, it was not considered appropriate to use these measurements for the ‘do-nothing’ scenario as traffic flows along SH1 are predicted to significantly decrease when CSM2 opens, thereby reducing noise levels for dwellings close to SH1.

To provide a more appropriate baseline, noise levels were calculated based on traffic volumes that take into account the CSM development and which assume that no changes are made to the existing road layout. Based upon these volumes, road surfaces and average speeds the predicted noise level at dwellings in the project area was predicted for both the ‘do nothing’ and ‘do minimum’ scenarios.

Under the ‘do nothing’ scenario, noise levels at a number of dwellings would exceed the 64 dB L$_{A_{eq}(24h)}$ noise criteria set out in the standard in 2026 as a result in increases in traffic over time. In contrast, the results for the ‘do minimum option identified that in 2026 all predicted noise levels would be below the 64 dB L$_{A_{eq}(24h)}$ noise criteria set out in the standard, and accordingly no specific noise mitigation measures are considered necessary.

In comparison to the do-nothing scenario, therefore, the project is predicted to create a reduction in noise levels for the majority of dwellings. Although there is a minor predicted increase in noise levels at 670 Main South Road and 111 Pound Road of 1dB and 2dB respectively, noise at these properties will remain below the 64 dB L$_{A_{eq}(24h)}$ noise criteria set out in the standard. Overall, there will be no significant noise effects arising from the proposal.

### 7.5 Air Quality Effects

Beca Infrastructure Ltd has undertaken an assessment of air quality effects for the proposed works, which is attached as Appendix AB in the Scheme Assessment Report (Beca Infrastructure Ltd, SH1 Barters Road Investigation and Reporting – Assessment of Air Quality Effects, April 2012).

The air quality assessment is a Tier 2 assessment under the draft Transport Agency “Standard for Producing Air Quality Assessments for State Highway Projects” and the Ministry for the Environment “Good Practice Guide for Assessing Discharges to Air from Land Transport”. The purpose of the assessment is to determine the risk (low, medium or high) of vehicle emissions (including exhaust emissions and tyre and brake wear) causing significant adverse effects on human health or the environment. The assessment is based on criteria set out in the following standards and guidelines:

- The Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NESAQ)
- The Ministry for the Environment’s New Zealand Ambient Air Quality Guidelines
- Regional Air Quality Targets set out in Schedule AQL1 of the NRRP.

The project area lies within Christchurch Clean Air Zone 1, which has been gazetted as an airshed under the Air Quality National Environmental Standard as ambient concentrations of PM$_{10}$ within this zone frequently exceed the NESAQ threshold concentration of 50µg/m$^3$.

The Transport Agency air quality screening toolkit was used to assess the risk that vehicle emissions associated with the project may cause pollutant concentrations to exceed the relevant AQNES threshold concentrations.

Overall, the air quality effects of emissions from vehicles using roads in the project area are likely to be marginally improved or unchanged in the with-project scenario when compared to the do–minimum scenario. Notwithstanding the location of the project in an already degraded airshed and the proximity of
sensitive receptors, adverse effects on air quality arising from the vehicle emissions associated with the operation of the project are expected to be minor.

7.6 Ecological Effects

The existing environment in the vicinity of the subject site has been highly modified from its natural state due to pastoral farming and long standing residential and commercial development.

The City Plan and Environment Canterbury's online GIS database do not identify any areas with conservation value within the project area. The Barters Road drain runs through the project area. The potential effects on this drain are limited to sedimentation effects during construction, which will be addressed through the ESCP.

Potential effects on groundwater as a result of the excavation and deposition will be addressed in a subsequent resource consent application to Environment Canterbury should this be required. Potential effects on human health as a result of the excavation of potentially contaminated land will be addressed through the resource consent application to CCC under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.

Overall, the ecological effects requiring consideration under this AEE are considered to be insignificant.

7.7 Landscape and Visual Effects

The project area does not contain any significant or distinguishing landscape features. The visual landscape is a mix of rural, infrastructure (road and rail), industrial, commercial and residential uses. An indicative landscape planting plan has been prepared for the realigned sections of Waterloo and Pound Roads.

The proposed planting scheme focuses on integrating the carriageway into the surrounding environment and providing a level of amenity for future road users. No planting is proposed on SH1 as this is an established roading corridor with limited space. Given the proposed planting and considering that the project area does not contain significant landscape features, any landscape or visual effects of the project are not significant.

7.8 Archaeological, Cultural and Heritage Effects

There are no silent files or recorded sites of heritage or archaeological importance (of either a Maori or Colonial nature) in the area of works according to the New Zealand Historic Places Trust 'Register of Historic Places, Historic Areas, Wāhi Tapu and Wāhi Tapu Areas', the City Plan or Environment Canterbury's online GIS database. The site is not within a Ngai Tahu Treaty Settlement Area.

The Transport Agency has a Cultural Heritage Risk Model that identifies recorded archaeological, cultural and historic heritage sites in proximity to SH1, and identifies risk zones where there is a high probability of encountering unrecorded archaeological and cultural heritage. The model shows low risk within this project area location in terms of consulting with Historic Places Trust and Ngai Tahu.

In the event that any artefacts of cultural or historical significance are uncovered, the contractors will be required to follow the protocols specified in the Transport Agency’s Accidental Discovery Protocol.
7.9 Community Effects

Closing the Barters Road rail crossing and relocating the crossing further to the east will improve the safety for people using the small commercial area at the existing intersection, removing turning traffic from the vicinity of the parking area outside the existing shops. There will be no disruption to cyclist or pedestrian movements across the Barters Road rail crossing as this will remain open.

The noise assessment has identified that there will be no significant changes in ambient noise for dwellings in the vicinity of the roading developments.

The project is driven by the intention to improve safety in the Templeton area. As identified in the Scheme Assessment Report, this change, in addition to the reductions in traffic anticipated to result from the future opening of CSM2/3, will reduce the traffic flowing through Templeton and increase road safety in the area.

There will be no significant adverse effects on the parking available to the existing tavern, and no adverse effects upon the parking that is presently available outside the shops on Barters Road or adjacent to the intersection. This was an issue in the initial consultation as an upgrade of the existing intersection would have resulted in the loss of some parking. The proposed solution as advanced in this Notice of Requirement avoids the loss of parking outside the exiting shops.
8 Consultation

8.1 Process

Consultation regarding this project has been undertaken with the relevant stakeholders as well as directly affected parties and the wider community. The consultation process has involved the following steps:

- Initiation of contact with identified stakeholders and directly affected parties through a phone call / letter outlining the project.
- Meetings with each stakeholder and directly affected party to discuss the project and options and seek feedback.
- Inform the wider community of the project and options through a newsletter and open day (2011).
- Develop a preferred option that best addresses the project’s objectives, social and environmental matters and economic analysis.
- Inform stakeholders and directly affected parties of the preferred option through a meeting / phone call / letter.
- Inform the wider community of the preferred option through a second newsletter (2012).

8.2 Consultation

In early 2011 the key stakeholders and directly affected parties were met with and the project, along with the four options and the ‘do-minimum’ option, were introduced. The following is a summary of consultation with key stakeholders and directly affected parties, and set out the responses to those concerns, and any resulting changes to the proposal.

**Selwyn District Council (SDC)**

SDC considered that the principles of the Christchurch Rolleston and Environs Transportation Study (CRETS) should be incorporated, and in particular the use of Pound Road to access the airport. SDC were concerned new traffic signals on SH1 could create an additional delay for through traffic and were more comfortable with the project proceeding once the Christchurch Southern Motorway 2 project was constructed.

**Christchurch City Council (CCC)**

CCC considered that Options 2 and 3 would result in a significant amount of additional road network that would potentially become redundant in the future. CCC preferred the option 4 alignment as it tied in with CCC’s long term roading strategy.

**KiwiRail**

KiwiRail preferred Option 3 as it creates a separation between the Waterloo Road / Barters Road intersection and the railway crossing. Option 4 was acceptable but would require a new railway crossing and significant costs. The costs will be borne by the Transport Agency.

**Environment Canterbury (ECan)**

ECan were concerned with potential implications of the project on bus routes / bus stops on Waterloo Road. As agreed with ECan, CCC and the PC19 developers, the bus stops will be relocated within the PC19 development which was considered to be more appropriate and better service potential employees traveling to the development. Accordingly bus stops are not part of this project.
Islington Park Limited

Islington Park Limited is the developer behind Plan Change 19. Islington Park Limited was supportive of the project. The initial road layout for the Plan Change is similar to Option 4.

Main South Road Shop Owners and Tenants

This group was generally supportive of safety improvements in the area. The owners and tenants on the southeast side of the Barters Road / SH1 / Marshs Road intersection were strongly opposed to signalisation of this intersection as proposed under Options 1 – 3 as this would remove or reduce carparking to the shop fronts. Option 4 was preferred as on-street parking would not be affected.

Islington Tavern and Jones Brothers

The owners of the Islington Tavern and the property owners immediately to the west of the tavern (Jones Brothers) were generally not opposed to the extension of Pound Road to connect with SH1 through their properties as proposed under Option 4. The tavern owners sought that access to their bottle store be maintained, which is proposed to be provided for from Pound Road between SH1 and the railway crossing.

8.3 Options Consultation

In November 2011 a newsletter describing the options was distributed to properties within and adjacent to the project area. The newsletter advised of the upcoming open day. A copy of this newsletter is included in Appendix G of the Scheme Assessment Report. No responses were received prior to the open day.

An open day was held at Templeton Primary School on 24 November 2011 and was attended by 11 members of the public. Options 1 to 4 (Option 4 being the preferred option) were presented at the open day. Additionally, an option to undertake short term improvements was presented as it was understood at that time that the project was likely to go on hold pending future funding availability. A feedback form was distributed at the open day. The attendees at the open day, as well as the respondents who completed the feedback form, were generally supportive of the project and Option 4 in particular, but raised the following concerns:

- Potential for noise and glare and loss of on-street parking affecting properties south of the proposed extension of Pound Road to connect with SH1;
- Concerns that upgrades should happen as soon as possible to prevent future crashes;
- Suggestion that the current speed limit should be reduced from 70kph to 50kph until such time as the project is implemented; and
- Potential for increased traffic volumes using the route as a result of construction of the Christchurch Southern Motorway 2 project.

8.4 Preferred option

A second newsletter was distributed to properties within and adjacent to the project area in July 2012. The newsletter provided an update to the project by outlining the preferred option being taken forward in this AEE and providing feedback regarding the concerns raised through the previous consultation. This newsletter is included in Appendix G of the Scheme Assessment Report.

Several telephone queries were received following the newsletter distribution, raising the following issues:
- Whether the project will prohibit right turns into and out of properties on SH1 and general property access queries
- Treatment of Pound Road (will it become a cycle route or part of a land swap with the Islington Park Plan Change) and how property access will be retained
- The ability to manoeuvre into and out of properties.

These matters have been taken into account in the design of the new SH1 / Pound Road intersection.
9  Relevant Statutory Documents

9.1  Resource Management Act 1991

The purpose of the Resource Management Act (RMA), as set out in Section 5 of the Act, is to promote the sustainable management of natural and physical resources. This is defined as:

…managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while -

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) Safeguarding the life–supporting capacity of air, water, soil, and ecosystems; and

(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.

The project will improve a section of the transport network, specifically by making the Barters Road intersection safer and more efficient for present and future users. The project is intended to be consistent with the growing transportation needs of the Region and will not preclude future opportunities for other land transport development, such as public transport. A better aligned and connected Pound Road will facilitate and support a western arterial land transport network and its role to distribute traffic to strategic City infrastructure and around the City to adjoining regions.

Overall, the benefits of the project are consistent with the purpose and principles of the RMA.

Matters of National Importance (s6)

Section 6 of the RMA sets out matters of national importance which must be recognised and provided for. None of these matters are considered relevant to the proposed works.

Other Matters (s7)

Section 7 of the RMA lists the matters to which particular regard must be given. The following matters are considered relevant to this application:

(b) the efficient use and development of natural and physical resources:

(c) the maintenance and enhancement of amenity values:

(f) maintenance and enhancement of the quality of the environment:

Completion of this upgrade will provide for more efficient use of the transport network by enabling a more strategic link to the west and relieving pressure on SH1 through Hornby to extend the life of the existing road network. The manner in which the project is to be carried out, including mitigation measures such as landscaping, will ensure the quality and amenity values of the surrounding environment is maintained, and potentially enhanced.

Overall, the project is considered to be consistent with the relevant matters in Section 7.

Treaty of Waitangi (s8)
Section 8 of the RMA requires that the principles of the Treaty of Waitangi be taken into account when exercising functions under the Act. It is considered that the proposed works do not impinge upon any of these principles. There are no silent files, statutory acknowledgement areas or sites of significance to Tangata Whenua within the project area.

**9.2 Land Use Recovery Plan**

In late 2012 the Earthquake Recovery Minister directed Environment Canterbury to develop a Land Use Recovery Plan (LURP) for Greater Christchurch.

The LURP, which took effect from 6 December 2013, puts land use policies and rules in place to assist rebuilding and recovery of communities that have been disrupted by the earthquakes, helping to achieve the vision of the Recovery Strategy for Greater Christchurch. Where necessary it will override existing Council district plans and will direct changes to the Regional Policy Statement and District Plans to provide for earthquake recovery.

A key objective identified in the LURP is to “Support an integrated transport network”. Action 40 (Protect future opportunities in network rebuild) of the LURP supports this objective and relates to the proposed works. Action 40 includes the following provisions:

- Councils and NZTA to ensure that rebuilding of the transport network protects future opportunities for supporting:
  - i. intensification of residential and commercial development within existing urban areas
  - ii. a range of transport modes (including walking, cycling, public transport and rail) in and between centres and existing and new business and residential areas
  - iii. a strategic freight network that provides for distribution and servicing needs of businesses to, from and within metropolitan greater Christchurch, while managing the effects on local communities.

The proposed works are consistent with and give effect to Action 40 of the LURP.

**9.3 Canterbury Regional Policy Statement**

The CRPS, which became operative in January 2013, provides an overview of the resource management issues facing the region, and outlines the objectives, policies and methods to achieve integrated management of natural and physical resources in the Canterbury Region.

**Objectives**

*Objective 5.2.3:*

A safe, efficient and effective transport system to meet local regional, inter-regional and national needs for transport, which:

1. supports a consolidated and sustainable urban form;
2. avoids, remedies or mitigates the adverse effects of transport use and its provision; and
3. provides an acceptable level of accessibility; and
4. is consistent with the regional roading hierarchy identified in the Regional Land Transport Strategy.

**Policies**
Policy 5.3.7:

In relation to strategic land transport network and arterial roads, the avoidance of development which:

(1) adversely affects the safe efficient and effective functioning of this network and these roads, including the ability of this infrastructure to support freight and passenger transport services; and

(2) In relation to strategic land transport network and arterial roads, to avoid development which forecloses the opportunity for the development of this network and these roads to meet future strategic transport requirements.

Policy 5.3.8:

Integrate land use and transport planning in a way:

(1) that promotes:
   
   (a) the use of transport modes which have low adverse effects;

   (b) the safe, efficient and effective use of transport infrastructure, and reduces where appropriate the demand for transport;

(2) that avoids or mitigates conflicts with incompatible activities; and

(3) where the adverse effects from the development, operation and expansion of the transport system:

   (a) on significant natural and physical resources and cultural values are avoided, or where this is not practicable, remedied or mitigated; and

   (b) are otherwise appropriately controlled.

Policy 5.3.9:

In relation to regionally significant infrastructure (including transport hubs):

(1) Avoid development which constrains the ability of this infrastructure to be developed and used without time or other operational constraints that may arise from adverse effects relating to reverse sensitivity or safety.

(2) Provide for the continuation of existing infrastructure, including its maintenance and operation, without prejudice to any future decision that may be required for the on-going operation or expansion of that infrastructure.

(3) Provide for the expansion of existing infrastructure and development of new infrastructure, while:

   (a) recognising the logistical, technical or operational constraints of this infrastructure and any need to locate activities where a natural or physical resource base exists; and

   (b) avoiding any adverse effects on significant natural and physical resources and cultural values and where this is not practicable, remedying or mitigating them, and appropriately controlling other adverse effects on the environment; and
(c) when determining any proposal within a sensitive environment (including any environment the subject of section 6 of the RMA), requiring that alternative sites, routes, methods and design of all components and associated structures are considered so that the proposal satisfies sections 5(2)(a) – (c) as fully as is practicable.

Overall, it is considered that the project is consistent with the relevant objectives and policies of the CRPS, with the project having been designed in order to avoid, remedy or mitigate any adverse effects on the surrounding environment and the existing transport infrastructure. The Main South Road and Barters Road Intersection Upgrade project will improve the current safety and efficiency issues of local roads accessing SH1, provides for cyclists and pedestrians, bypass traffic to the airport, and contribute to the increasing accessibility of the roading network for alternative modes of transport.

9.4 Proposed Canterbury Land & Water Regional Plan

This Plan was publicly notified in August 2012, and its rules took immediate effect. The purpose of the Plan is to identify the resource management outcomes or goals for managing land and water resources in Canterbury to achieve the purpose of the Resource Management Act.

The area subject to the Notices of Requirement is within the Christchurch/West Melton Sub–regional section. The land is underlain by a semi–confined/unconfined Aquifer. The location of the roads proposed in these Notices of Requirement is such that the Objectives and Policies of the Plan have no direct bearing on the proposal. Rule 5.155 of the Plan provides for excavations greater than 100m$^3$ as a permitted activity provided the excavation is no deeper than 1 metre above the known ground water level for the site.

No significant excavation is anticipated for the roads and improvements contemplated in these Notices of Requirement and it is considered that there will be no consent required under the Land and Water Regional Plan.

9.5 Canterbury Natural Resources Regional Plan

The Natural Resources Regional Plan (NRRP) regulates the sustainable management of natural resources in Canterbury. It is complemented by catchment or location–based plans or water conservation orders. While it will eventually be amended or replaced by the Land and Water Regional Plan, as an operative Plan its provisions presently have effect.

The rules in this Plan do not affect the Notice of Requirement. However, construction of the road may require resource consents for the following activities:

- Discharge of stormwater (to land or water) may be required for works undertaken by the Transport Agency. A similar consent may be required for the Christchurch City Council’s portion of the roads if they are not addressed by the Council’s existing global discharge consents.
- Excavation of land over an unconfined or semi–confined aquifer (Rule WQL36); and
- Deposition of material over an unconfined or semi–confined aquifer (Rule WQL37).

The applicability of these rules will be determined by the volume of material to be excavated and/or deposited during future construction works.
9.6 Canterbury Regional Land Transport Strategy

The Canterbury Regional Land Transport Strategy (RLTS) sets the strategic direction for land transport within the Canterbury region over a 30 year period. The RLTS acknowledges the private motor car as being (and continuing to be) the primary mode of transport used by the region’s inhabitants. Reliance on the motor car is particularly prevalent in rural areas, for mobility throughout rural areas and between rural and urban areas. Therefore, the maintenance of the region’s road network is essential in order to support mobility region-wide. The project is considered to support the aims and objectives of the RLTS.

The RLTS identifies SH1 in the Barters Road project study area as being part of the strategic transport network. This category of road is intended to provide a high level of mobility for people and freight transport within the region.

9.7 Christchurch City Plan

The Christchurch City Plan (City Plan) provides a framework to promote the sustainable management of the City’s land resources with specific methods and solutions developed to address issues for the City and District. The City Plan contains objectives and policies that apply to land use within the district. Volume 2: Section 7 (Transport) of the City Plan is directly relevant to the project, and the appropriate provisions are set out and addressed below.

Objectives

Objective 7.1: A sustainable transport system
A safe, efficient and sustainable transport system.

Objective 7.2: Road network
An efficient and effective road network that allows the City to function and develop with minimal conflict between land uses, traffic and people.

Objective 7.7: Transport safety
The maintenance and improvement of transport safety throughout the City.

Objective 7.8: Access to the City
Recognition of the need for regional, national and international links with the City and provision for those links.

Policies

Policy 7.1.1: To remedy, mitigate or avoid the adverse effects of the use of the transport system

Policy 7.1.2: To promote integration of transport and land use planning

Policy 7.1.3: To promote integration of the planning, management, and operation of all elements of the transport system.

Policy 7.1.4: To make efficient use of the transport system, particularly its infrastructure.

Policy 7.1.7: To design new roading works to visually complement or improve the area.
Policy 7.1.8: To maximise planting and landscaping associated with roading improvements, to avoid, remedy or mitigate their impact on the environment.

Policy 7.2.2: To protect the function of the road network and the environment of adjacent land uses from the adverse effects of high traffic generators.

Policy 7.2.4: To take account of social and environmental impacts as well as economic benefits when planning changes to the road network.

Policy 7.2.6: To encourage public participation in the planning of transport and roading improvements to avoid, remedy or mitigate adverse effects and make use of local knowledge.

Policy 7.7.1: To continue a substantial programme of traffic improvements, principally for safety reasons.

Policy 7.8.1: To provide for the effective and efficient operation and development of Christchurch International Airport.

The works proposed in the Notices of Requirement are consistent with and will advance the Objectives and Policies of the City Plan. The project is designed to reduce existing safety concerns associated with the current road alignment, and will reduce traffic congestion, which often occurs at the existing intersection. The efficiency of the road network in the Templeton area will be improved as a direct result of the implementation of the proposed works.

Mitigation measures, including landscaping, will ensure any adverse effects on the amenity values and quality of the environment are appropriately avoided or mitigated. In this respect, the design of the road and landscaping is considered to visually complement the surrounding environment and assist in integrating the new roading design into the surrounding area.

Public consultation has been undertaken during the development of this project. The issues identified through this consultation have informed the design and ultimate selection of the preferred option. This process considered the potential economic impacts of the road alignment on adjacent small businesses and their owners. In addition, the project will provide easy and efficient access to and from the Christchurch International Airport from Templeton.

Overall, the project is consistent with the transport provisions of the City Plan. The project will assist with ensuring the development of an efficient, safe, and sustainable roading network and one which promotes easy accessibility for people and goods.

9.8 Greater Christchurch Transport Statement

The Greater Christchurch Transport Statement (GCTS) is an agreed statement of the UDS partners in the post-earthquake environment (December 2012). It has been approved by the Hon Gerry Brownlee, Minister of Transport and Minister for Canterbury Earthquake Recovery. It has the following Statement of Intent:

The key transport providers are working together to deliver a seamless transport system over the greater Christchurch area that:
• Supports earthquake recovery and the growth of Canterbury, and
• Connects people and places with a range of sustainable and affordable transport options.

This will be achieved through:

• Integrated decision making on transport and land use, and
• Aligning our transport investments to get better value for money.

The GCTS has a focus on a number of agreed key transport priorities for the recovery of Greater Christchurch, particularly those that assist economic growth, and promote the principles of a “one network” philosophy. The objectives include providing safe, efficient and resilient links to connect people and places, and optimising the use of existing transport assets through managing travel demand and networks. The Main South Road and Barters Road Intersection Upgrade project is consistent with and supports these objectives. The Western Corridor/Airport corridor is a top priority in the GCTS in regard to Journey benefits in terms of connectivity, resilience, efficiency and travel choice.

9.9 Christchurch Transport Strategic Plan

The Christchurch Transport Strategic Plan (CTSP), published by the CCC in late 2012, will be used to inform the transportation programmes included in the Council’s three year plan and subsequent annual plans and long term plans.

The CTSP's vision is to keep Christchurch moving forward by providing transport choices to connect people and places. To achieve the vision and address the City's transport challenges, the CTSP focuses on four goals: improving access and choice; creating safe, healthy and liveable communities; supporting economic vitality; and creating opportunities for environmental enhancements. In achieving these goals, CTSP seeks to manage competing interests for limited road space by assigning where possible a clear priority to one type of movement (freight, public transport, general vehicles or active transport) while recognising the importance of creating attractive street environments. Certain routes/corridors will be managed to work better for specific movements, such as freight or strategic traffic, while others will be managed for public transport, cycling and pedestrians. Where a greater priority has been given to one type of movement, good alternative routes will be identified for other modes.

Both the CTSP and the GCTS promote the principles of a “one network” management philosophy with the UDS partners, including the NZTA. The focus on transport priorities for the recovery of Christchurch necessitates supporting the strategic freight and business traffic efficiency of the State highway network. The need to protect the efficiency of the State highway network means that local traffic is expected to be accommodated where possible within the local roading network to maximise the strategic network efficiency of the State highway network. The Main South Road and Barters Road Intersection Upgrade project is therefore entirely consistent with achieving this outcome as it protects the efficiency of the state highway network and increases the current safety of SH1 and intersecting roads.

9.10 Safer Journeys: The Safe System Approach to Road Safety

The Ministry of Transport’s Safer Journeys document for 2010–2020 sets out its vision for road safety in New Zealand of “a safe road system increasingly free of death and serious injury”. To support this vision, Safer Journeys takes a Safe System Approach to road safety. The Safe System Approach focuses on creating safe roads, safe speeds, safe vehicles and safe road use.

The goal is to achieve the following four goals:
- **Safe roads** - that are predictable and forgiving of mistakes. They are self-explaining in that their design encourages safe travel speeds.

- **Safe speeds** - travel speeds suit the function and level of safety of the road. People understand and comply with the speed limits and drive to the conditions.

- **Safe vehicles** - that prevent crashes and protect road users, including pedestrians and cyclists, in the event of a crash.

- **Safe road use** - road users that are skilled and competent, alert and unimpaired. They comply with road rules, take steps to improve safety, and demand and expect safety improvements.

The Barters Road Notice of Requirement supports the *Safe Roads and Roadsides* aspect of the Safer Journeys approach.
10 Summary

10.1 Project Summary

The NZ Transport Agency and Christchurch City Council are planning improvements to the Main South Road (State Highway 1)/ Barters Road / Marshs Road intersection and the linkage from Pound Road to State Highway 1 (SH1) in Templeton. The purpose of the proposed improvements is to:

- improve the current safety and efficiency issues for traffic at the Barters Road and Marshs Road access onto SH1;
- provide for the short to medium term travel demands created from future use of the Pound Road bypass;
- improve connectivity and safety for cyclists and pedestrians;
- provide a safer and more efficient relocated railway crossing for motorised transport; and
- enable access to the PC19 development.

This AEE supports two Notices of Requirement necessary to undertake the proposed improvement works. A new designation is required for the construction of the proposed Pound Road / Waterloo Road intersection and the realignment of the approaches to this intersection. CCC is the requiring authority for this work. Additionally, the Transport Agency is required to alter its existing designation over SH1 in Templeton in order to accommodate the new Pound Road / SH1 intersection and the approaches to this intersection.

This AEE has addressed the relevant matters prescribed under the Resource Management Act 1991 in relation to designations. Additionally, the matters set out in section 176A(3) have been included in this AEE, and accordingly it is considered that a separate outline plan is not necessary.

10.2 Section 168A and Section 171 Assessment

Section 168A(3) identifies the matters that a territorial authority must consider when considering a notice of requirement from a territorial authority, and Section 171(1) identifies the matters that a territorial authority must consider when considering a Notice of Requirement from a requiring authority. These matters are the same in both sections, and are as follows:

(a) any relevant provision of –
   (i) a national policy statement;
   (ii) a New Zealand Coastal Policy Statement;
   (iii) a regional policy statement or proposed regional policy statement; a plan or proposed plan; and

(b) whether adequate consideration has been given to alternative site, routes or methods of undertaking the work if –
   (i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or
   (ii) it is unlikely that the work will have a significant adverse effect on the environment; and

(c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and

(d) any other matters the territorial authority considers reasonably necessary in order to make a decision on the requirement.
Each of these matters has been addressed in this report, and are summarised below for both the new designation and the alteration to the existing designation.

Section 168A(3)(a) and Section 171(1)(a) – Relevant Statutory Documents

The relevant action of the Land Use Recovery Plan, objectives and policies of the Canterbury Regional Policy Statements, the Proposed Canterbury Land and Water Regional Plan, Canterbury Natural Resources Regional Plan, Canterbury Regional Land Transport Strategy, Greater Christchurch Transport Statement, Christchurch Transport Strategic Plan and the Christchurch City Plan have been considered in relation to the benefits of the project and its effects on the environment. Overall, it is considered the project is generally consistent with these instruments.

Section 168A(3)(b) and Section 171(1)(b) – Consideration of Alternatives

A number of alternate road alignments were identified and assessed, as outlined in the Scheme Assessment Report. The option put forward in these Notices of Requirement emerged as the highest ranking in the Scheme Assessment Report.

Consideration has also been given to utilising the resource consent or Plan Change processes instead of a Notice of Requirement. Both the Transport Agency and CCC are requiring authorities and have the ability to utilise the designation process. In this case it is considered that the designation process is the most efficient and effective process to provide for the changes proposed to the roading network at Templeton.

Section 168A(3)(c) and Section 171(1)(c) – Is the work reasonably necessary?

The proposed works will enhance the safe and efficient operation of the roading network around Templeton, by moving turning traffic away from the existing Barters Road intersection further to the west. The modelling, discussed in the Scheme Assessment Report (attached), has identified benefits in the changes to the roading that would not occur if the project did not proceed. It is therefore considered that the work is reasonably necessary to achieve the purposes of both the Transport Agency and the CCC, being to improve the safety and efficiency of the roading network.

10.3 Conclusion

The Assessment of Effects concludes that the benefits of the project, weighed alongside the proposed measures to avoid, remedy and mitigate the adverse effects, means the project is consistent with the purpose and principles of the Resource Management Act 1991.

The proposed works have been assessed against the provisions of section 168 A and section 171 of the Act and overall it is concluded that the works are reasonably necessary to achieve the improvements sought to the roading network in the vicinity of Barters Road, and overall the sustainable management purpose of the RMA will be achieved.