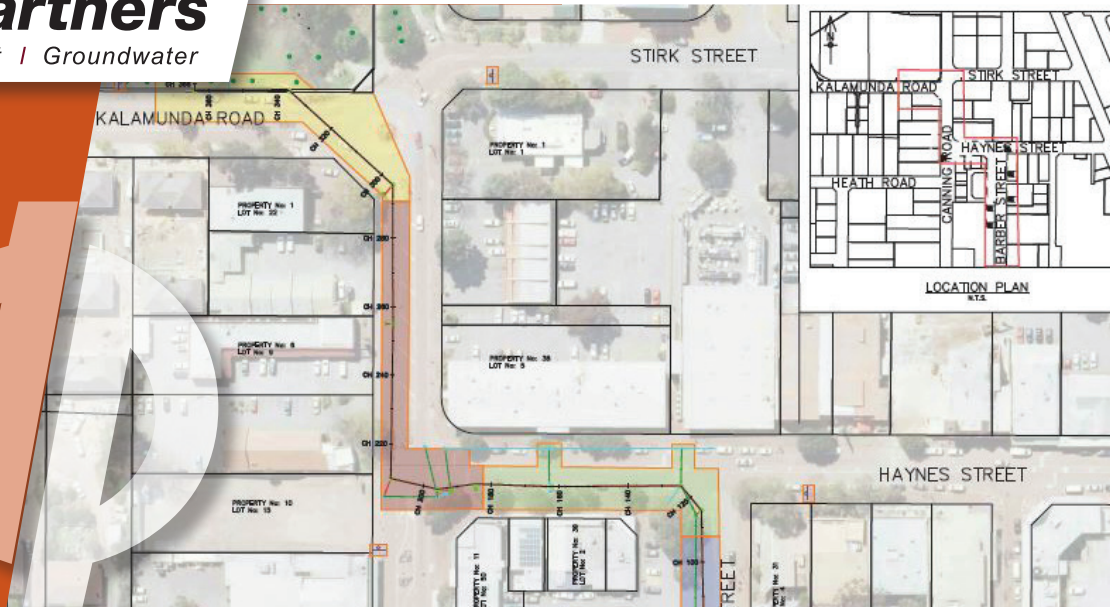


City Centre Stormwater Drains, Kalamunda, WA



Stormwater drainage upgrade in the City of Kalamunda Town Centre

As part of several improvement projects to the City of Kalamunda Town Centre, Douglas Partners was engaged to provide geotechnical advice for the installation of a 400 m long section of proposed stormwater drainage pipes and associated manholes.

The 400 m long alignment of proposed stormwater drainage pipes was divided into four sections along Kalamunda Road, Canning Road, Haynes Street and Barber Street. Some of these roads form main commuting routes towards Perth.

Douglas Partners geotechnical specialists were engaged to undertake an investigation which included the drilling of thirteen diamond core boreholes. The collected field data was used to assess the presence or otherwise of any hard ground conditions, including possible high strength iron cemented laterite and granitic bedrock, over the proposed excavation depths and to provide advice on suitable excavation equipment and respective excavation rates. The identification of hard ground conditions together with minimising disruption to the surrounding community during the field investigation were understood from the Shire of Kalamunda to be two critical requirements for the geotechnical investigation, to ultimately minimise risks of claims from prospective earthworks contractors and complaints from residents.

Because the location of the proposed alignment within existing roads, high volume of daily traffic on these roads and the presence of several adjacent com-

mercial buildings, the field investigation was undertaken during approved night periods. Test locations were carefully selected and a Noise Management Plan was prepared for the Shire of Kalamunda's approval, and in particular included commencing the investigation at test locations in the vicinity of existing residences and progressing away, in order to minimise disruption to the surrounding community.

In particular, Douglas Partners provided advice on the impact of shock induced vibrations during rock excavation, on nearby buildings and associated provisions to minimise the abovementioned vibrations.

Douglas Partners worked closely with the Shire of Kalamunda to ensure that the investigation would provide a reasonable coverage of the proposed alignment whilst meeting the main objectives of the investigation, i.e. the identification of hard ground conditions with minimal disruption to the surrounding community.

CLIENT Shire of Kalamunda

YEAR 2017

SCOPE OF WORK

- Assessment of ground conditions;
- Occurrence and depth of any problematic excavation conditions;
- Advice on suitable excavation equipment;
- Advice on suitable materials for pipe bedding, surrounding and backfill, including re-use of excavated materials; and
- Advice regarding anchor blocks and pipe embedment design.

“Douglas Partners scope of work was tailored to minimise disruption to the community, while collecting all necessary information to suitably characterise the ground conditions and minimise the risk of claims from prospective earthworks contractors.”

Sergio Neves
Associate
Geotechnical Engineer

