S&L
Land Development
and Design Specialists

GREENHILL PARK RESIDENTIAL SUBDIVISION

STAGE 15

INFRASTRUCTURE DEVELOPMENT COMPLETION REPORT

POPHAM ROAD, GREENHILL PARK

CHEDWORTH PROPERTIES LTD

Our reference: 19-30378-01

Prepared for Chedworth Properties Limited

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This report has been prepared specifically for Chedworth Properties Ltd and supplied to Hamilton City Council for works clearance for Greenhill Park Subdivision and no responsibility is accepted by S&L Consultants Ltd for the use of any part of this report in other contexts without written approval.

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REVISION	Issued for Application	**DATE**	14 April 2021

Quality Assurance Statement		
Task	**Responsibility**	**Signature/Approval**
Written by:	Barry Pearson Engineer	
Reviewed by:	Nic Fu Client Principal	

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1.0 BACKGROUND

1.1 Introduction

This application relates to Greenhill Park Subdivision Stage 15 located alongside Webb Drive, south of Pardoa Boulevard.

Works included the following:

- Stage 15 subdivision roading (including Gosset Avenue and Couldsack Ave)
- Wastewater reticulation and lot connections
- Stormwater reticulation for roading and lot connections
- Watermain and lot connections
- Associated Streetlights
- Electrical reticulation for subdivision lots and street lighting
- Ultrafast Broadband reticulation
- Gas supply for subdivision development
- Concrete footpath construction
- Landscape planting

On the west side of Webb Drive, Stage 15 development works for 27 residential lots have been carried out under Hamilton City Council Subdivision Resource Consent 011.2018.6632, granted 05 September 2018.

This application is made on behalf of Chedworth Properties Ltd for Works Clearance from Hamilton City Council. Works clearance is sought in order to obtain certification pursuant to Section 224(c) of the Resource Management Act 1991 for Greenhill Park subdivision, Stage 15, LT 560839. A copy of the land transfer plan is included in Appendix 8.

This report addresses the key details associated with the Infrastructure provided.

1.2 Entities Involved with Development

The following companies have been involved with the construction of the Subdivision;

• Developer:	Chedworth Properties Ltd
• Consultant Design Engineers:	Beca Consultants
• Consultant Engineers and Surveyors:	S&L
• Geotech Engineer	DBCon Engineers
• Landscape Design	Boffa Miskell
• Landscape Planting	Native Awa
• Head Contractor:	Online Contractors 2016 Ltd (OLC)
• Subcontractors & Suppliers:	
Civil Materials Supply	Hynds
Stormwater and Wastewater Drainage	West Construction Ltd (WC)

Geotechnical Testing	Opus/WSP
Concrete Supply	Bowers Bros Concrete
Concrete kerbs	Waikato Construction
Carparks	Purrfect Paving
Footpaths	Purrfect Paving
Concrete Cutting	Ironman Concrete Cutting
Streetlights	Ibex Lighting
Power Reticulation	WEL Networks – (Subcontractors: Northpower and Bayonne)
Road Materials Supplier	Stevenson Resources, Gleeson Quarry – Huntly
Road Surfacing Contractor	Higgins Contractors
Road Signs	Directionz Ltd
Road Line Marking	Linemark
Gas	First Gas
Telecommunication	Ultrafast Fibre – (Subcontractor: Civtec)

1.3 Observation of Works

S&L undertook regular inspections of the works as the project progressed and reviewed the contractor's quality assurance measures including test results. The progress of the construction was reviewed formally at weekly site meetings as well as discussions on site with the contractor.

The observation and supervision activities by S&L were undertaken to a level of CM3 (weekly site visits) as described in the IPENZ document "Guidelines on the Briefing and Engagement of Consulting Engineering Services" with additional inspections when required by the nature of the works under construction.

1.4 As-Built Data

A full set of as-built drawings and excel spreadsheets have been appended to this document in Appendix 9 and 10. These include the as built and asset value information required in accordance with the RITS. The as built data has also been included in this application in electronic format and a copy enclosed in final works clearance report for reference.

1.5 CCTV

CCTV inspections have been completed for the wastewater and stormwater lines. The footage has been provided to Hamilton City Council separately.

1.6 Design and Hamilton City Council Development Unit Design Acceptance

The following Approvals have been gained from the HCC Development Unit:

- Greenhill Park Stage 15 was designed by Beca Consultants and approved by HCC Development Unit.

1.7 Amendments to approved plans

Amendments from the approved plans have been made during construction as follows:

- Pavement type C Local Access Road/Lane, changed to one 200mm thick layer of GAP40 on 500mm of Blue Brown Rock CBR> 15. Refer to email confirmation included in completion report for Stage 12
- Kerbing changes made removing flush kerbs and footpaths. Refer to email confirmation included in completion report for Stage 12

2.0 EARTHWORKS

Earthworks have been carried out onsite under the supervision of S&L and DBCon Engineers. DBCon Engineers were engaged as the geotechnical engineer. The DBCon report of stage 15 subdivision earthworks and recommendations for building development is included in Appendix 1, detailing earthworks compliance with HCC RITS and NZ Standards.

3.0 ROADING INFRASTRUCTURE

3.1 Road Construction

Roads have been constructed in general accordance with the pavement shown on the approved engineering plans, except where the pavement has been changed as discussed in section 1.7 above.

Review of the road construction is as follows:

3.2 Subgrade

The underlying natural soils comprise sandy silts of varying strengths. Significant subgrade improvement works have been carried out as follows:

- Much of the Stage 15 subgrade consists of imported hardfill for the backfill of the stormwater and sanitary sewer underground lines beneath.

- All areas in the road carriageway that have not been backfilled with hard brown rock have been undercut to a minimum depth of 0.5m below subgrade level and replaced with a subgrade improvement layer of compacted hard blue brown rock.

- Subsoil drains have been laid beneath kerbs discharging into catchpits

Testing of the subgrade improvement layer included proof rolling with no visible weave, stringing by way of GPS survey, and Clegg hammer testing to confirm that a CIV>15 (CBR>15) had been achieved for all roads in Stage 15. Results of the Clegg hammer testing are included in Appendix 2(a).

A GPS survey was undertaken throughout Stage 15 and checked against the design surface. Results are included in Appendix 2(a), confirming that design pavements depths have generally been achieved to ITS tolerances.

All road subgrades have been tested using clegg hammers, showing that CBR values over 15 have been consistently achieved on all roads. The results from the Subgrade Clegg Hammer testing are summarised below:

Subgrade Clegg Hammer Results Summary

Road 22 CH 160 - 260	Range CIV 42 - 49 Mean CIV 49	Min Inferred CBR 123*
Road 37 CH 280 - 340	Range CIV 42 - 58 Mean CIV 49	Min Inferred CBR 123*
Road 38 CH 130 - 200	Range CIV 42 - 56 Mean CIV 50	Min Inferred CBR 123*

***Note: CBR = $0.07(CIV)^2$ formula applied in accordance with RITS

3.3 Subbase

The subbase of roads with pavement type C have been incorporated into the basecourse layer. Construction and testing methods for these roads are covered in the basecourse section below.

3.4 Basecourse

Subdivision roading comprises of the following basecourse types:

Road 22, 37 and 38 (Couldsack Avenue and Gosset Avenue)	200mm GAP40 basecourse – Stevensons Tauhei

QA Supplied for the basecourse included in Appendix 2(b) includes the following:

- Material testing sheets
- Stringing
- Compaction testing of the basecourse with Nuclear Densometer
- Clegg Hammer tests
- Benkelman Beam testing

Stringing

Stringing of the basecourse was carried out from kerbs prior to sealing. Results are included in Appendix 2(b) confirming that design pavements depths have generally been achieved to ITS tolerances.

Clegg Hammer

Clegg hammer testing has been undertaken on the subdivision roading basecourse showing compliance with RITS.

Nuclear Densometer

Nuclear densometer testing was carried out by Opus in order to confirm density.

Nuclear Densometer testing has been undertaken in accordance with RITS Section 3.8.2.5 & 3.8.3.4, Table 3-22. Results are included in Appendix 2(b).

The Target MDD for the GAP40 pavement is 2.22t/m3 as per Opus MDD report (project number: 2-68015.00, lab reference: HA 6289/2_VHMDD).

Results are summarised below:

Basecourse NDM Results Summary

Road 22 CH 160 - 260	Min 97% of MDD (Target MDD 2.22t/m3)	Mean 98% of MDD
Road 37 CH 280 - 340	Min 96% of MDD (Target MDD 2.22t/m3)	Mean 98% of MDD
Road 38 CH 130 - 200	Min 97% of MDD (Target MDD 2.22t/m3)	Mean 98% of MDD

3.5 Benkelman Beam Results

Benkelman beam tests were carried out by Opus on the basecourse surface following surfacing. Results are summarised below:

Basecourse Benkelman Beam Results Summary

	Deflection (mm)			
	Maximum (mm)	**Minimum (mm)**	**%age over 1.8mm (A2)**	**Average (mm)**
Road 22 CH 160 - 260	1.10	0.60	0	0.89
Road 37 CH 280 - 340	1.14	0.68	0	0.87
Road 38 CH 130 - 200	0.86	0.36	0	0.63

Results conform to the maximum and average deflection requirements of Section 3.8.3.5, Table 3-23 of the RITS for A2 (up to 10^5 EDA) roads.

3.6 Road Surfacing

A summary of road surfacing details laid by Higgins is listed below:

Road Surfacing Summary

Road	Membrane Seal	Surface
Pavement Type C	Grade 4 single coat water proofing membrane. Residual Application Rate: 1.0L/m^2	30mm DG7

4.0 WATER INFRASTRUCTURE

4.1 Installation

The water supply reticulation completed by Online Contractors includes the following components:

- 150mm mPVC PN12RRJ principal main
- 63mm PE80 PN12.5 ridermain
- Associated fittings, valves and hydrants
- Residential connections to all lots

Quantities and installation locations are shown on as-built records appended to this document.

4.2 Testing and Disinfection

Online Contractors Ltd carried out all aspects of pressure testing of the supply lines and disinfection prior to livening, in accordance with the ITS and in the presence of HCC.

Testing included the following items:

- Water supply pressure test result
- Water Supply disinfection
- Water Supply E Coli test

The pressure test and the observation of FAC (Free Available Chlorine) was witnessed by HCC's testing officer. The E Coli test samples were collected as part of the testing and the samples have been reviewed by HCC Officer, L. Parkes and passed.

Pressure testing results, pipe laying checklists and Bacto Test results are included in Appendix 3.

5.0 WASTEWATER INFRASTRUCTURE

Supporting quality assurance documentation for Wastewater Infrastructure supplied by the contractor and reviewed by S&L is attached in Appendix 4.

The gravity sewerage system comprises installation of the following components:

- 150mm dia uPVC SN16 wastewater main
- 100mm dia uPVC SN16 sewer laterals and lot connections
- Associated manholes.

Testing and inspection includes the following:

- CCTV inspection which has been supplied separately to Council
- Inspection of Manhole Structures
- Pressure testing of Manhole Structures by West Construction observed by HCC
- Pressure testing of 150mm dia wastewater main by West Construction observed by HCC
- As-builting by West Construction and S&L with final as-builts compiled by S&L.

6.0 STORMWATER INFRASTRUCTURE

6.1 Installation

In accordance with the approved design, stormwater from Stage 15 discharges into the Area M swales for treatment and conveyance:

- Swale 3B is located on the south side of Popham Rd and flows west.

The primary system comprises of:

- UPVC & RCRRJ stormwater mains and headwalls
- UPVC laterals and lot connections
- Road catchpits and leads
- Manholes

Observation of the works was undertaken by S&L and includes:

- CCTV inspection which has been supplied separately to Council
- Inspection of all manhole structures, catch pits, outlets and inlets
- As-builting by Online Contractors and S&L Consultants with final as-builts compiled by S&L.

QA and checklists provided by the contractor and reviewed by S&L are included in Appendix 5.

6.2 Secondary flow paths

In accordance with the approved design, the stormwater from Stage 15 discharges into swale 3B for treatment and conveyance.

A piped drainage network has been designed to collect runoff from the road and lots with standard sumps. The pipes are designed to convey (without significant surcharge) the 50% AEP flows to the network of swales downstream. Each individual lot is provided with a piped connection to the main drainage system in case on-lot soakage is not appropriate.

In events larger than a 50% AEP, secondary stormwater flows for Stage 15 will flow down the road shoulders to a low point at the road 38/39 intersection and flow north across the overland flow path (lot 507), then spill into Swale 3B that runs along the southern side of Popham Road and flows west.

See attached as-built drawings 21879-M-15-R1 and 21879-M-15-SW1 in appendix 9 showing the location and direction of stormwater overland flow.

7.0 STREET LIGHTING, STREET MARKING AND SIGNAGE

Streetlights have been designed, supplied and installed by Ibex Lighting Ltd. All quality assurance documentation for the street lights is included in Appendix 7.

Signage has been installed by OLC subcontractor Directionz Ltd in accordance with approved drawings and RITS requirements.

Carriageway paint marking has been completed by OLC subcontractor Linemark Ltd and is in accordance with approved drawings and RITS requirements.

8.0 LANDSCAPING

8.1 Hard Landscaping

There are no hard landscaping works included in stage 15.

8.2 Soft Landscaping

The landscape planting within the road reserves and the stormwater swales has been completed. An inspection by HCC Parks and Open Spaces has been completed.

9.0 NETWORK UTILITIES

Network utilities have been provided as follows.

9.1 Power

Electrical reticulation has been installed by WEL Networks for both street lighting and residential supply.

A WEL Networks works clearance statement is attached in Appendix 7.

9.2 Gas

First Gas has installed reticulation to enable future connection by individual lot owners. A completion Certificate is included in Appendix 7.

9.3 Telecommunications

Ultrafast Fibre has installed reticulation to individual lots. An acceptance letter is included in Appendix 7.

10.0 FINAL INSPECTION

A final inspection has been undertaken and was attended by Hamilton City Council's Development Engineers and associated staff from S&L and Online Contractors.

A separate inspection by Parks and Open Spaces has also been completed.

APPENDIX 1

Earthworks QA Documentation

- DBCon Engineers Report on Subdivision Earthworks & Recommendations for Building Development

GREENHILL PARK RESIDENTIAL SUBDIVISION

STAGE 15
Area M, Greenhill Park

HAMILTON

REPORT ON SUBDIVISION EARTHWORKS AND RECOMMENDATIONS FOR BUILDING DEVELOPMENT

Our Ref: DB 171738-AREA-M-S15-01

Prepared for: Chedworth Properties Limited

Date: 19th April 2021

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21879-01-M15-EW1
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1.0 Subdivision Development Earthworks

1.1 Introduction

Stage 15 of Greenhill Park is currently accessed from Pardoa Boulevard. Stage 15 comprises 27 residential lots (numbered 407 to 433). The locations of these lots are shown on attached *Cut/Fill Plan*, drawing 21879-01-M15-EW1 included in Appendix I.

Bulk earthworks have been completed to re- contour the previously agricultural landscape for Stage 15 of the Greenhill Park Residential Subdivision in Hamilton. Works have been carried out in accordance with Hamilton City Council's (HCC) Subdivision Resource Consent: **011.2018.6632.001** dated: 05/09/2018. Prior to commencement of earthworks, geotechnical investigations were carried out by Beca Ltd (Beca) in 2016 [1].

HCC's Infrastructure Technical Specifications (ITS) set out the minimum standards for design and construction of public infrastructure within Hamilton City. Section 2.1.5 of the *Earthworks and Geotechnical Requirements* of the ITS states that the developer shall appoint a geo-professional to carry out functions as described in NZS 4404[5] Section 2.2.4. ITS Section 2.3.3.1 states that a geotechnical completion report shall be submitted as per NZS 4404 Section 2.6 including a statement of professional opinion on the suitability of land for building construction [4]. The developer has appointed DB Consulting Engineers (DBCE) Ltd as the geo-professional.

To satisfy the requirements of HCC's Resource Consent, the ITS and NZS 4404, this report summarizes the observations and testing undertaken during the development of the stage, discusses the suitability of the ground for the support of the proposed residential buildings and contains recommendations for the disposal of stormwater runoff generated on individual sites.

Included in Appendix I of this report is the proposed subdivision plan comprising the original Lot 605 DP 516275 and the proposed new lots 407-433 for Area M Stage 15. The included earthworks plan shows the cut/fill extent of the earthworks undertaken, test positions, and road and lot locations.

1.2 Earthworks in the Subdivision

The earthworks for stage 15 of the subdivision development were undertaken between February 2020 and October 2020.

These earthworks comprised

1. The stripping of surface topsoil to expose underlying natural soils
2. The placement of filling within Lots 407 to Lots 433
3. Backfilling and raising the ground level with new fill to create uniform fill platforms.
4. The reinstatement of the surface topsoil cover and subsequent grassing.

The soils encountered during the formation of the site and road subgrades were a mixture of silts, sands and pumiceous gravels, typical of Hinuera formation deposits in this area of Hamilton. These soils were those that had been identified in pre-construction site investigations by the Beca Report. The published geology indicates that Area M soils comprise Hinuera Formation alluvium at surface with Walton Subgroup overlain by Hamilton Ash in the gently sloping hill to the south of Area M.

The filling work was undertaken using these site soils gained from areas of cut on other stages from within the larger Greenhill Subdivision. Filling was undertaken during summer 2020 when drying back of the soils was possible to close to optimum moisture contents to achieve near maximum compaction densities. The sandy alluvial soils are expected to be free draining and is suitable for re-compaction with little or no moisture conditioning needed.

Upon completion of the earthworks, approximately 200 to 300 mm of topsoil was placed across the sites and the finished surfaces were grassed in accordance with Conditions of the Resource Consent. Areas where an initial grass strike did not take place were re-grassed. While the target topsoil depths after the earthworks were to be around 300 mm, no guarantee is implied or given that the topsoil on any part of any lot is 300 mm or less and it is recommended that future owners or designers or builders check topsoil depths when preparing site development plans and cost schedules.

1.3 Earthworks Standards

The earthworks in filling were undertaken using in situ Silty clay, silts mixtures gained from areas of cut across the larger subdivision and already used for the earlier stages of the development. The standards for the placement of filling, as stated in the earthworks contract documents, were to comply with NZS 4431:1989 “Code of Practice for Earth fill for Residential Development” and the Council ITS. Filling placed to these standards may be considered as good ground in terms of NZS 3604:2011 “Timber Framed Structures.”

The compaction of the filling placed was monitored and tested for compaction density using a hand-held shear vane in finer grained silts and Silty CLAY. Adequate strengths would be achieved when an undrained shear strength of 100 kPa or more had been developed in silts and clays. And scala penetrometer in granular soils.

Materials used where the same basic strata as being used for the previous Stages of works, with a high level of consistency based on previous test results.

1.4 Filled Ground

During the placement of filling on the road subgrades and on areas intended for residential development, the contractor, OLC, stripped and removed all topsoil and other surface organic soils. Post construction testing was carried out to confirm the interface between the cut and fill. Filling was placed in discrete layers with compaction applied through sheepsfoot drum rollers and smooth drum rollers.

As most of the filling placed comprised the Silty SAND and Sandy SILT identified in the pre subdivision boreholes, testing of the compaction achieved was mostly undertaken with a handheld shear vane and NDM testing (Nuclear Density Meter).

The results indicate that the construction filling standards have been met. Foundations may therefore be detailed to NZS 3604:2011 where a timber framed subfloor containing shallow piles, bearers and joists is contemplated. Concrete floors designed to NZS3604 can be used on most lots where they are not immediately adjacent to a stormwater swale.

1.5 Areas of Cut

Areas developed in cut are shown on 21879-01-M15-EW1 (Appendix I). Only four lots from Lot 426 to 429 is having cut around 0.4m to 1.5m. In these areas, the ground at formation levels was observed to comprise the same silts and sands that had been used for filling elsewhere and as identified by pre subdivision tests.

1.6 Test Results in Filling Placed

A summary of the tests undertaken by DBCE is present in Appendix IV. The test positions are shown on 21879-01-M15-EW1 and the test results are in Appendix IV.

The shear vane and scala penetrometer test results show that acceptable soil strengths had been developed in all fill areas tested.

1.7 Test Results in Areas of Cut and Natural Ground

Only for Lot 426 to Lot 429 there is cut performed around 0.5m to 1.5m. The natural ground at the finished ground surface or under the filling comprised silty sands and sands as had been identified in the pre-subdivision investigation boreholes.

The results of the tests undertaken indicate that “good ground” as defined in NZS3604:2011 is present. No areas that were tested will require any future ground improvement work for buildings supported

1.8 Land Hazards

1.8.1 Land Stability

There are no landform stability issues within Stage 15 of the Greenhill Park Subdivision. The specification from the developer for the site earthworks was that the lots were to be graded as flat as possible with a desirable gradient of 0.5%.

1.8.2 Flooding

The final lot levels have been set based on infrastructure requirements and freeboard from flood levels developed as part of the stormwater design for the larger subdivision. The means of disposal of stormwater runoff from lots in this stage of the subdivision are described in the catchment and overland flow assessments by Beca (interpretive Report Lot Levels Area M). In the report for area M, a 1% AEP flood event is identified for each swale system. The three relevant swales for Stage 15 are Swale 1D, 3B and 3A (R.L. 38.46 1% Flood level). A flood level of 38.00 R.L.

has been used in assessing the flood risk in stage 15. This equates to minimum lot levels of 38.925m to 40.020m R.L. across the stage (with low being the west end and high being the east end). A list of Lot Levels for Stage 15 is included in Appendix V.

Site grading during house construction must not lower finished levels below the minimum finished ground levels identified by Beca without further review of the impacts on flooding. Earthworks must not direct stormwater runoff to adjacent properties, or towards buildings, or create areas of localized ponding. All overland flow is to be towards the road frontage on each section, where falls will direct surface flow towards the Swale 1D and Swale 3B.

It is the responsibility of the building design professional to ensure that the requirements for mitigation for the hazard of flooding are met by the design prior to submitting to Council for consent. Confirmation of the swale construction and flood levels are excluded from the scope of this report and are to be covered separately with sign-off of infrastructure works.

1.8.3 Liquefaction

The potential for the hazard of liquefaction for Area M of the Greenhill Park Subdivision is discussed in "Greenhill Park Geotechnical Interpretation and Design - Area M" by Beca and dated 13 July 2018. Foundations within 5m of the top of the swales are classed as TC2 like foundations. The liquefaction summary plan is appended to this Completion report. Specifically, the requirements are:

- 0m – 1.5m no habitable dwellings to be built within 1.5 m of the swale crest.
- 1.5 – 5m adopt an enhanced TC2 _like foundation
- Beyond 5m of swale crest no specific requirements to mitigate liquefaction effects.

The Beca report refers to zones adjacent to the swales being in a TC2 type area as is defined in guidelines published by the Ministry of Business, Innovation and Employment (MBIE). MBIE recommends that TC2 type foundations should typically include 'an enhanced foundation slab' as is currently being installed for new houses in Christchurch. Alternatively, MBIE advises that houses may be supported on timber piles and a timber framed subfloor as detailed in NZS 3604 to meet a Type A construction as described in their guidelines. For stage 15 none of the lots are affected by swale so no specific requirements are needed to mitigate liquefaction.

1.8.4 Expansive Soils

The underlying soil conditions are primarily non-expansive sand strata and shallow slightly expansive silt layers. Zones of fill are encountered across the sites, with deeper fill located in all lots except Lot 428 and Lot 429 where fill is maximum of 0.4m. There is backfill of old drainage ditches in Lot 431 and Lot 432. The backfill is typically silty sand and not considered expansive. Overall, Stage 15 is underlain by non or slightly expansive soils. Any soils with a higher expansivity are expected to be limited in extent, and unlikely to result in changing the soil class.

For purpose of foundation recommendations, Lots 407-433 can be treated as M Class sites.

This is indicative of the greater depth of fill under these sites and therefore greater variability in the ground conditions. This is not to say the strata is moderately expansive, but that it may perform with comparable movement.

2.0 Disposal of Stormwater

Greenhill Park has been designed with a swale network to limit peak flows from the subdivision to 80 % of the 1 % AEP pre-development rate, and 90 % of the 10 % and 50 % AEP pre-development rates (Beca Ltd. [2016] Greenhill Park - Stormwater Design, for Chedworth Properties Ltd, 29 June 2016). Area M has been designed to include roadside swales flowing in an approximately east to west direction. Stage 15 includes swale 1D and 3B. The depth of the swales has been designed to accommodate the fall and cover depth required of the piped drainage system. The piped drainage network has been designed to convey the 50 % AEP flows from roads and lots to the swale network, with each lot to be provided with a piped service connection. The stormwater plan is presented in the S&L Drawing 'Stormwater as Built DWGs reported separately.

All lots will require on-site stormwater efficiency measures as per the District Plan requirements (Rule 25.13.4.5 Water Efficiency Measures). These include:

1. Detention of stormwater to 80% of pre-development runoff by an appropriate means. This has largely been achieved by the swale network for events greater than the 50 % AEP storm. For the 50 % AEP and smaller events, the stormwater efficiency measures are expected to provide sufficient additional mitigation to achieve this requirement.
2. Permeable surfaces protected to achieve at least 20% above the minimum standard of the zone (i.e., 40 % site permeability).
    a. Sites within the Ruakura Medium Density Residential Zone require a minimum permeability of 20 % (Rule 4.6.5) and are limited to 50 % site coverage (Rule 4.6.6).
3. Rainwater tank for non-potable reuse system
4. Other equivalent features

Stormwater management must ensure that the rate of stormwater discharge offsite is at or below pre-development rates. Stormwater management measures shall be implemented, as appropriate, in accordance with the following drainage hierarchy:

1. Retention for reuse
2. Soakage techniques
3. Detention and gradual release to a watercourse
4. Detention and gradual release to stormwater reticulation.

Section 42 of the Subdivision Resource Consent (SRC) relating to Stages 9-15 state that "Each residential lot shall be provided with a means for disposal of stormwater, with no private stormwater pipes or soakage systems crossing from one lot to another except were covered by an easement" .

Section 43 of the SRC states that water efficiency measures for the individual residential lots are to be detailed for each subdivision stage. “Where retention for reuse tanks is proposed they shall be a minimum of 5,000L to ensure they are effective or where the lot is less than 300m2 should be appropriately designed considering the specific site constraints. The required stormwater efficiency measure is to be implemented at the building consent stage and maintained on an on-going basis at the owners’ expense”.

Section 44 of the SRC requires a consent notice on each title advising of the required water efficiency measures to be implemented and maintained on an ongoing basis.

Section 55 of the SRC states the requirement for lot development to be undertaken in general accordance with the recommendations in the report: Greenhill Park Geotechnical Interpretation and Design – Area M, prepared by Beca Ltd., 13 July 2018.

In the Stage 15 development area, each site is to be tested for soakage capability by the property owners. For those sites that have a sufficient soakage capability, disposal of stormwater is to be undertaken onsite using soakage and/or bioretention systems with overflow to the lot stormwater service connection. Those sites that are not soakage viable are to retain stormwater for reuse by way of a Slimline Rain Tank or other similar type water tank. The size of the tank is to be 5000 litres and the tank is to be plumbed into the house for use as a non-potable water supply including for garden irrigation and in general accordance with the HCC guidelines for the Implementation of Water Efficiency Measures. The Slimline rain tank system is described in Appendix V. This requirement will be advised to purchasers and will be implemented through the building consent process by HCC. A consent notice is to be registered on the certificates of titles for each lot which describes these investigation and design requirements.

Details of the required stormwater measures are included in Appendix V, sourced from the Greenhill Park Design Guidelines.

3.0 Retaining Walls

There are no retaining walls that were constructed by the developer within stage 15.

4.0 Professional Opinion

It has been demonstrated in this Geotechnical Completion Report, that earthworks have been completed and building platforms have been constructed to comply with Council’s ITS specifications and the New Zealand Building Code. Recommendations have been provided within the report for the disposal of stormwater from individual lots, for the ongoing development of the lots and for the mitigation of liquefaction risk where applicable.

In accordance with ITS Section 2.3.3.1, a statement of professional opinion is enclosed in Appendix II of this document. This statement is presented in the form of Checklist 2.2 of Council’s Development Manual, Volume 4: Quality Systems for Land Development, and is accompanied by a *Summary of Geotechnical Data for Individual Lots* which summarizes the information and recommendations contained in this report.

5.0 Applicability

Recommendations contained in this document are based on data from observations of site earthworks, boreholes, and test results. Inferences about the nature and continuity of subsoils away from these locations are made but cannot be guaranteed.

In all circumstances, if variations in the subsoils occur which differ from those described or are assumed to exist, the site should be inspected by an engineer suitably qualified to make an informed judgement and provide advice on appropriate improvement measures.

This report has been prepared specifically for Stage 15 as shown for Lots: 407-433, DP543207 of Area M within the Greenhill Park Residential Subdivision. No responsibility is accepted by DB Consulting Engineers Ltd for the use of any part of this report for other development sites without their written approval.

Report Prepared By: Date:19th April 2021

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Ranjan Ghiloria

Civil Engineer

Report Reviewed By: Date: 19th April 2021

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Michael Richardson

Senior Engineer

References

[1] Ruakura Land Development - LDP Geotechnical Factual Report by Beca, 15 April 2016.

[2] C. Hughes and K. Read, "Ruakura Development - Stage 1 Geotechnical Investigation – Liquefaction Potential Detailed Assessment," Opus International Consultants, Ltd., Hamilton, New Zealand, 2014.

[3] M. Hughes and L. Shuler, "Report on Preliminary Geotechnical Investigation, Ruakura Development, Hamilton," S&L Consultants, Ltd., Tauranga, New Zealand, 2015.

[4] "Section 2 Earthworks and Geotechnical Requirements," in *Infrastructure Technical Specifications*, Hamilton, New Zealand, Hamilton City Council, 2013.

[5] "NZS 4404 Land Development and Subdivision Infrastructure," in *New Zealand Standards*, Wellington, New Zealand, Standards New Zealand, 2010.

[6] "Greenhill Park - Geotechnical Interpretation and Design-Area 1" by Beca 28 October 2016.

[7] "Part 5: Earthquake Actions - New Zealand," in *NZS 1170.5:2004 Structural Design Actions*, Standards New Zealand, 2004.

[8] "Greenhill Park Design Report - Area I (Stage 5, 6, 7 & 8) by Beca 20 December 2016

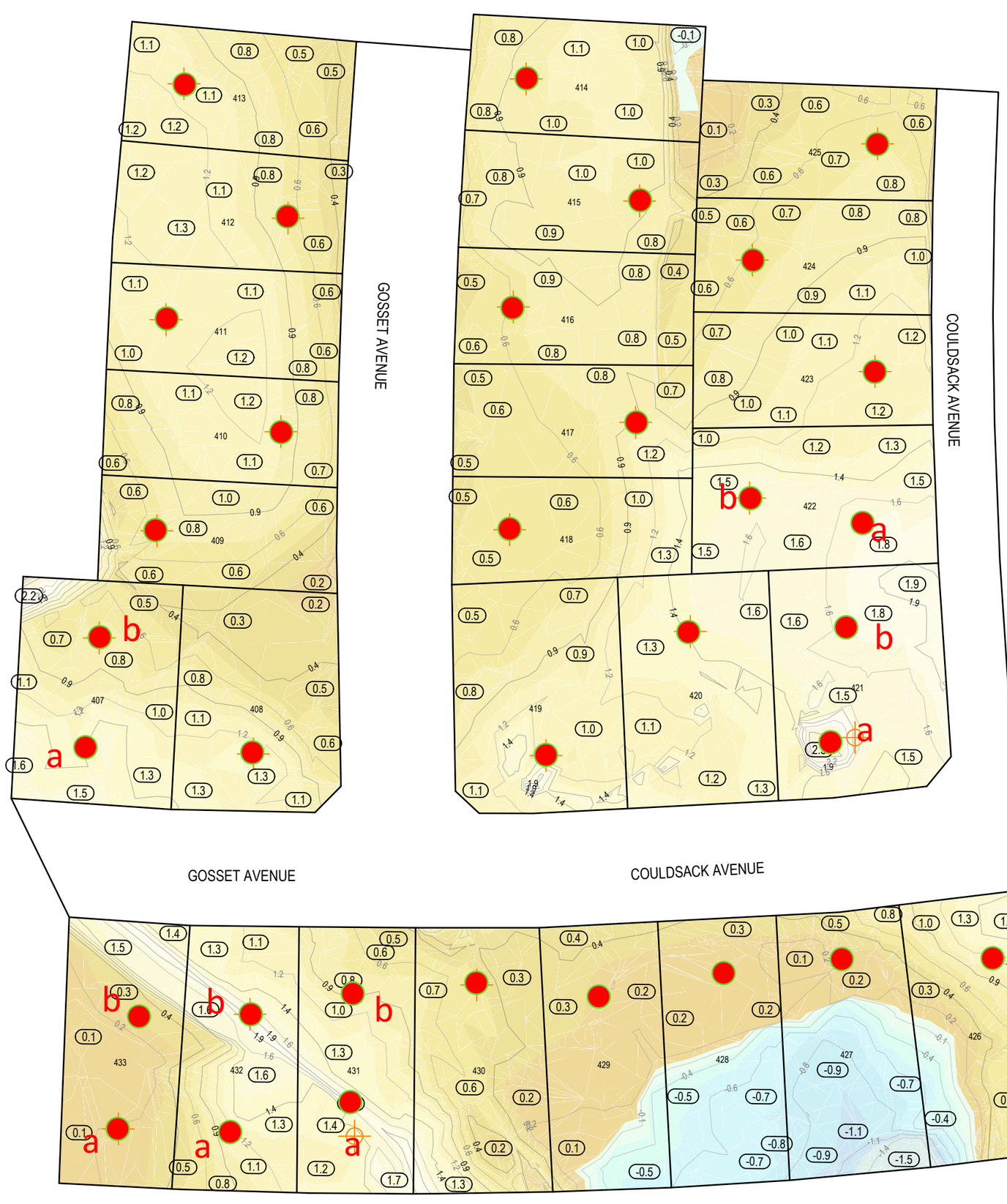
[9] "Clause B1: Structure," in *Acceptable Solutions and Verification Methods For New Zealand Building Code*, Wellington, Ministry of Business, Innovation and Employment, 2014.

[10] "Part A: Technical Guidance," in *Repairing and rebuilding houses affected by the Canterbury earthquakes*, Wellington, Ministry of Business, Innovation and Employment, 2012.

[11] "Clause E1: Surface Water," in *Acceptable Solutions and Verification Methods For New Zealand Building Code*, Wellington, Ministry of Business, Innovation and Employment, 2014.

[12] "Section 4 Stormwater," in *Infrastructure Technical Specifications*, Hamilton, New Zealand, Hamilton City Council, 2015.

Appendix I *Reference Drawings* Subdivision Plan
Cut/Fill Plan 21879-01-M15-EW1
Site Levels Plan



Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	-1.491	-1.250	
2	-1.250	-1.000	
3	-1.000	-0.750	
4	-0.750	-0.500	
5	-0.500	-0.250	
6	-0.250	0.000	
7	0.000	0.250	
8	0.250	0.500	
9	0.500	0.750	
10	0.750	1.000	
11	1.000	1.250	
12	1.250	1.500	
13	1.500	1.750	
14	1.750	2.000	
15	2.000	2.250	
16	2.250	2.500	
17	2.500	2.750	
18	2.750	3.000	
19	3.000	3.152	

CUT

FILL

LEGEND

DBCON GEOTECH TEST LOCATIONS

(0.8) DEPTH OF FILL

CUT/FILL CONTOUR INTERVAL: 0.25M

SHRIMPTON & LIPINSKI
LAND DEVELOPMENT & DESIGN SPECIALISTS
Ph. 07 577 6069
Email: info@sltga.co.nz
P.O. Box 231, Tauranga 3140
www.sltga.co.nz

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NP	SC	SC	04/21

	NAME	DATE		NAME	DATE
SURVEYED	SRC		DESIGNED		

COORDINATE SYSTEM: MT EDEN 2000 CIRCUIT
ORIGIN OF COORDINATES: ALP3 DP 534481
HEIGHT DATUM: MOTURIKI DATUM
ORIGIN OF HEIGHT: SS507 SO 42451 RL = 44.04

TITLE

CHEDWORTH PROPERTIES LTD
GREENHILL PARK
STAGE 15
CUT / FILL PLAN

PREPARED FOR

Chedworth Properties Limited — Greenhill Park

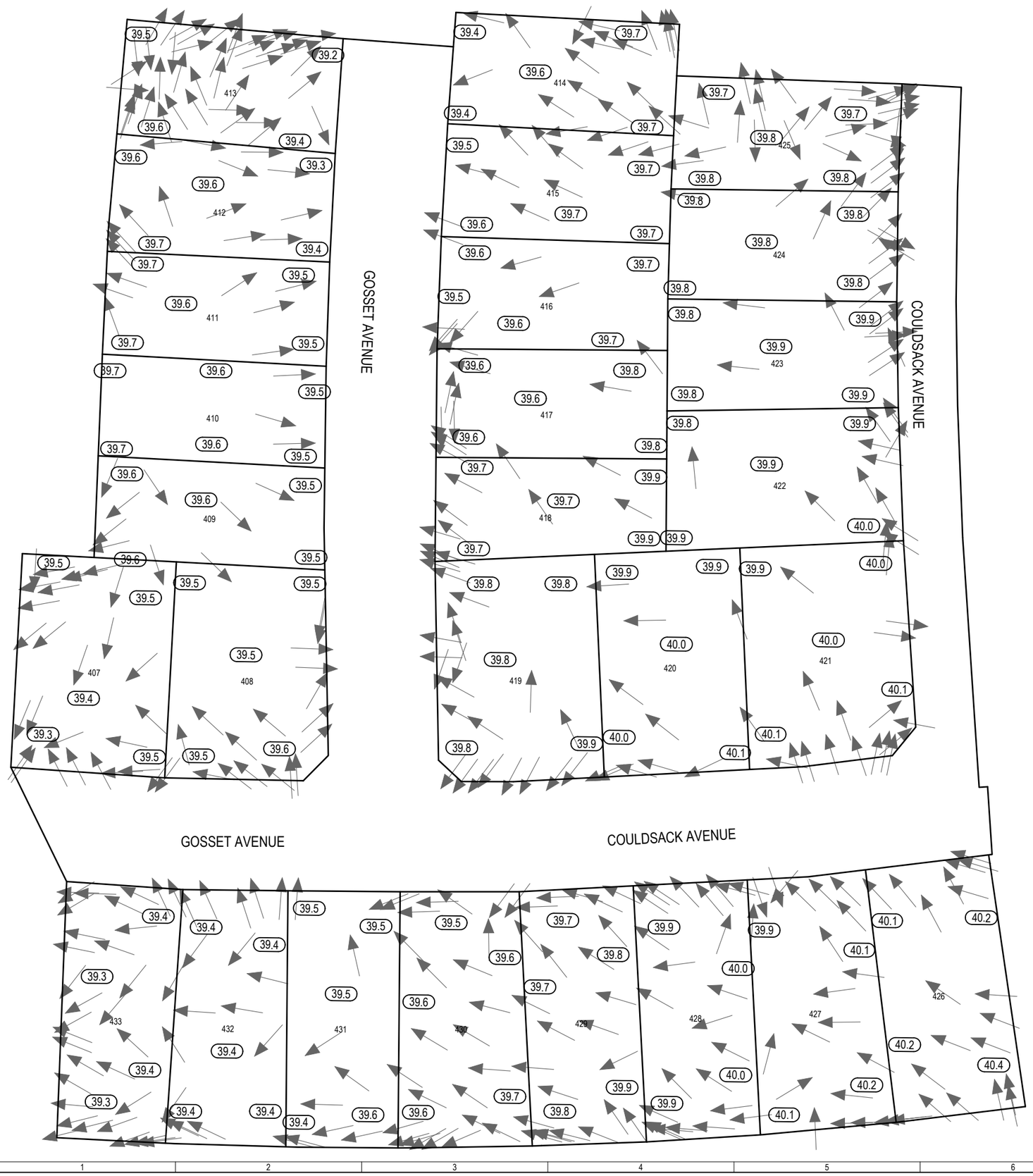
ORIGINAL SCALES @ A3: 1:500
DO NOT SCALE DIMENSIONS

STATUS: PRELIMINARY

DRAWING NO: 21879-01-M15-EW1

REVISION: 0

H:\0000 - H Drive\nparkinson\Autocad\21879 - Greenhill Park - Stage 15 Cut Fill and Geotech Plans\21879 - Greenhill Park - Stage 15 Cut Fill and Geotech Plans.dwg - Plotted: 7/04/2021



LEVELS ARE TAKEN ON REPLACED TOPSOIL.
THIS PLAN IS NOT TO BE USED FOR DESIGN PURPOSES

LEGEND

FLOW ARROW

(39.2) SPOT HEIGHT (GROUND LEVEL)

SHRIMPTON & LIPINSKI
LAND DEVELOPMENT & DESIGN SPECIALISTS
Ph. 07 577 6069
Email: info@sltga.co.nz
P.O. Box 231, Tauranga 3140
www.sltga.co.nz

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NP	SC	SC	04/21

	NAME	DATE		NAME	DATE
SURVEYED	SRC		DESIGNED		

COORDINATE SYSTEM: MT EDEN 2000 CIRCUIT
ORIGIN OF COORDINATES: ALP3 DP 534481
HEIGHT DATUM: MOTURIKI DATUM
ORIGIN OF HEIGHT: SS507 SO 42451 RL = 44.04

TITLE

SECTION LEVELS AND FLOW GEOTECHNICAL REQUIREMENT STAGE 15

PREPARED FOR

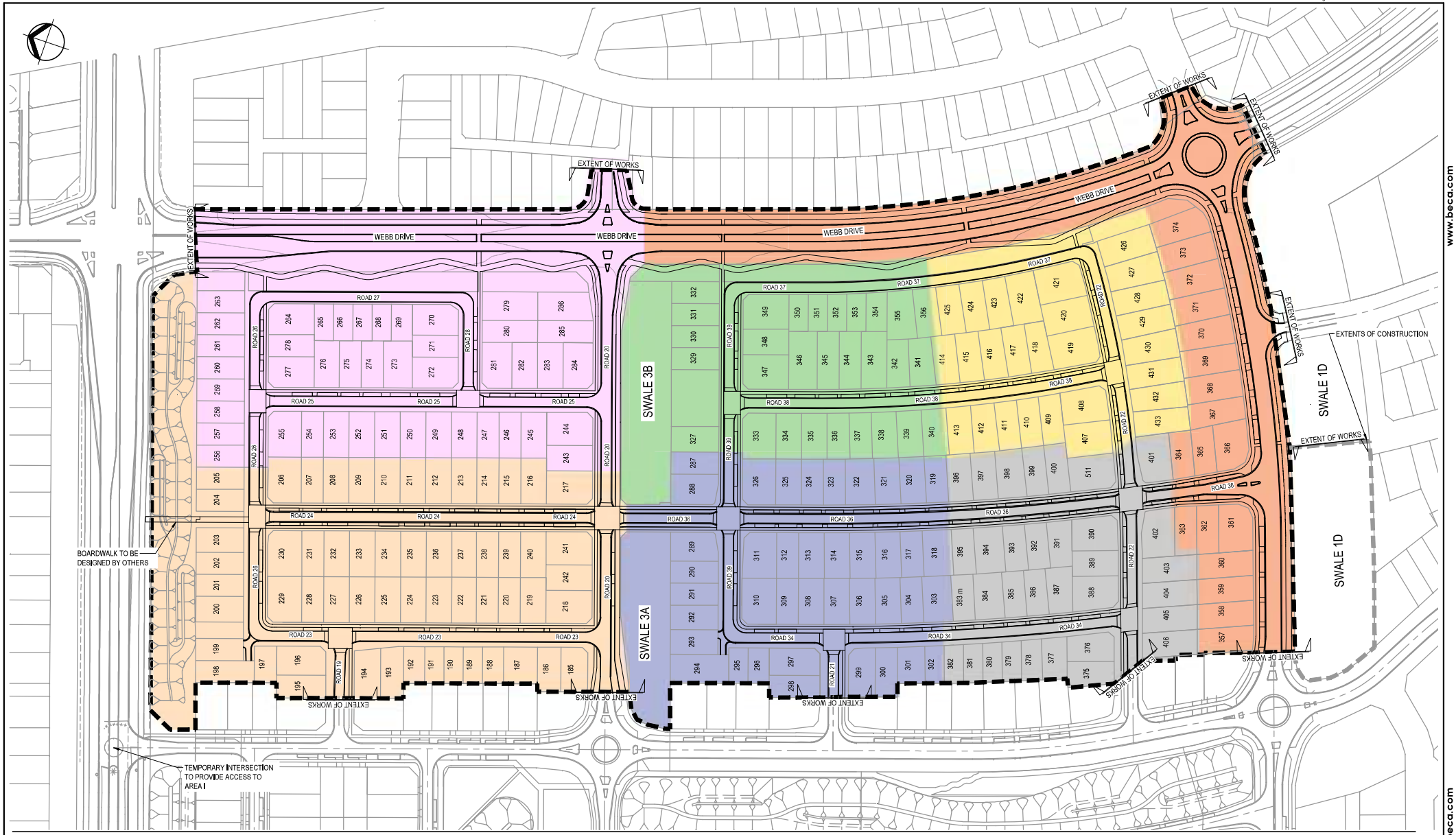
Chedworth Properties Limited — GREENHILL PARK

ORIGINAL SCALES @ A3	STATUS
1:500 DO NOT SCALE DIMENSIONS	PRELIMINARY

DRAWING NO: 21879-01-M15-G1
REVISION: 0

H:\0000 - H Drive\nparkinson\Autocad\21879 - Greenhill Park - Stage 15 Cut Fill and Geotech Plans\21879 - Greenhill Park - Stage 15 Cut Fill and Geotech Plans.dwg - Plotted: 7/04/2021

Drawing Plotted: 08 Oct 2018 9:57 a.m.



LEGEND:

- AREA M EXTENTS
- STORMWATER CULVERT
- BASIN LOW FLOW CHANNEL
- AREA M - STAGE 9
- AREA M - STAGE 10
- AREA M - STAGE 11
- AREA M - STAGE 12
- AREA M - STAGE 13
- AREA M - STAGE 14
- AREA M - STAGE 15

NOTES:

1. EXTENT OF WORKS IS DEFINED AS THE "AREA M EXTENTS" AS SHOWN ON THE PLANS.
2. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH HAMILTON CITY COUNCIL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (UNLESS OTHERWISE SPECIFIED).
3. DETAILS OF INTERFACING WITH OTHER PROJECT STAGES TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION

ORIGINAL DRAWING IN COLOUR

FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
1	FOR CONSTRUCTION	SM	PP	AJ	21.09.18

Drawing Originator: Beca

Original Scale (A1) 1:1000	Design	REMK	17.08.18	Approved For Construction*
	Drawn	SM	17.08.18	AJ
Reduced Scale (A3) 1:2000	Dsg Verifier	GJC	17.08.18	Date 21.09.18
	Dwg Check	GDC	17.08.18	

* Refer to Revision 1 for Original Signature

Client: Chedworth

Project: AREA M

Title: ROADING AND EARTHWORKS GENERAL ARRANGEMENT

Discipline: CIVIL ENGINEERING

Drawing No. 3411915-CA-2010 Rev. 1

Document No. 3411915-CA-2010.DWG

DO NOT SCALE

IF IN DOUBT ASK.

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Appendix II *Geotechnical Completion Forms*

Checklist 2.2 - Statement of Professional Opinion Summary of Geotechnical Data for Individual Lots
Summary of Geotechnical Data for individual Lots

NZS 4404: 2010 SCHEDULE2A (Checklist 2.2)

STATEMENT OF PROFESSIONAL OPINION AS TO SUITABILITY OF LAND FOR BUILDING CONSTRUCTION

Development: Greenhill Park Stage 15 **Developer:** Chedworth Properties Limited

At Pardoa Boulevard, Chartwell, Hamilton

I, Michael Richardson of DB Consulting Engineers, PO Box 1123, Taupo

Hereby confirm that:

1.0 I am a geo-professional as defined in clause 1.2.2 of NZS 4404:2010 and was retained by the developer as the geo- professional on the above development.

2.0 The extent of my inspections during construction, and the results of all tests carried out are described in my geotechnical completion report for Greenhill Park Area M Stage 15 dated 19 April 2021 (reference 171738-AREA-M-S15-01)

3.0 In my professional opinion, not to be construed as a guarantee, I consider that:

a. The completed works give due regard to land slope and foundation stability considerations.

b. The site ground affected by engineered certified filling is suitable for the erection there on of buildings designed according to the report recommendations provided that:

i. Lots 407-433 are subject to the recommendations in the summary for individual lots and specific design as required to address variable ground. An M Class Waffle slab or similar is expected as an appropriate foundation type for sites requiring specific design.

ii. All lots are subject to an engineering inspection during foundation excavations unless of further soils testing is carried out for building consent. Previous stages have not required further soils testing, but Council requirements are for a minimum 4 soils tests per lots to be carried out for building consent. We recommend construction supervision from an engineer should be carried out to confirm the shallow ground conditions are in accordance with this report and suitable for NZS3604 foundations for bearing strength.

4.0 This professional opinion is furnished to Hamilton City Council and the developer for their purposes alone on the express condition that it will not be relied upon by any other person and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any dwelling.

5.0 This certificate shall be read in conjunction with my geotechnical completion report referred to in clause 2 above and shall not be copied or reproduced except in conjunction with the full geotechnical completion report.

Signed **……** **Date: 21 April 2021**

Michael Richardson

Chartered Professional Engineer (Geotechnical)

CPEng 1005467

Summary of Geotechnical Data for Individual Lots

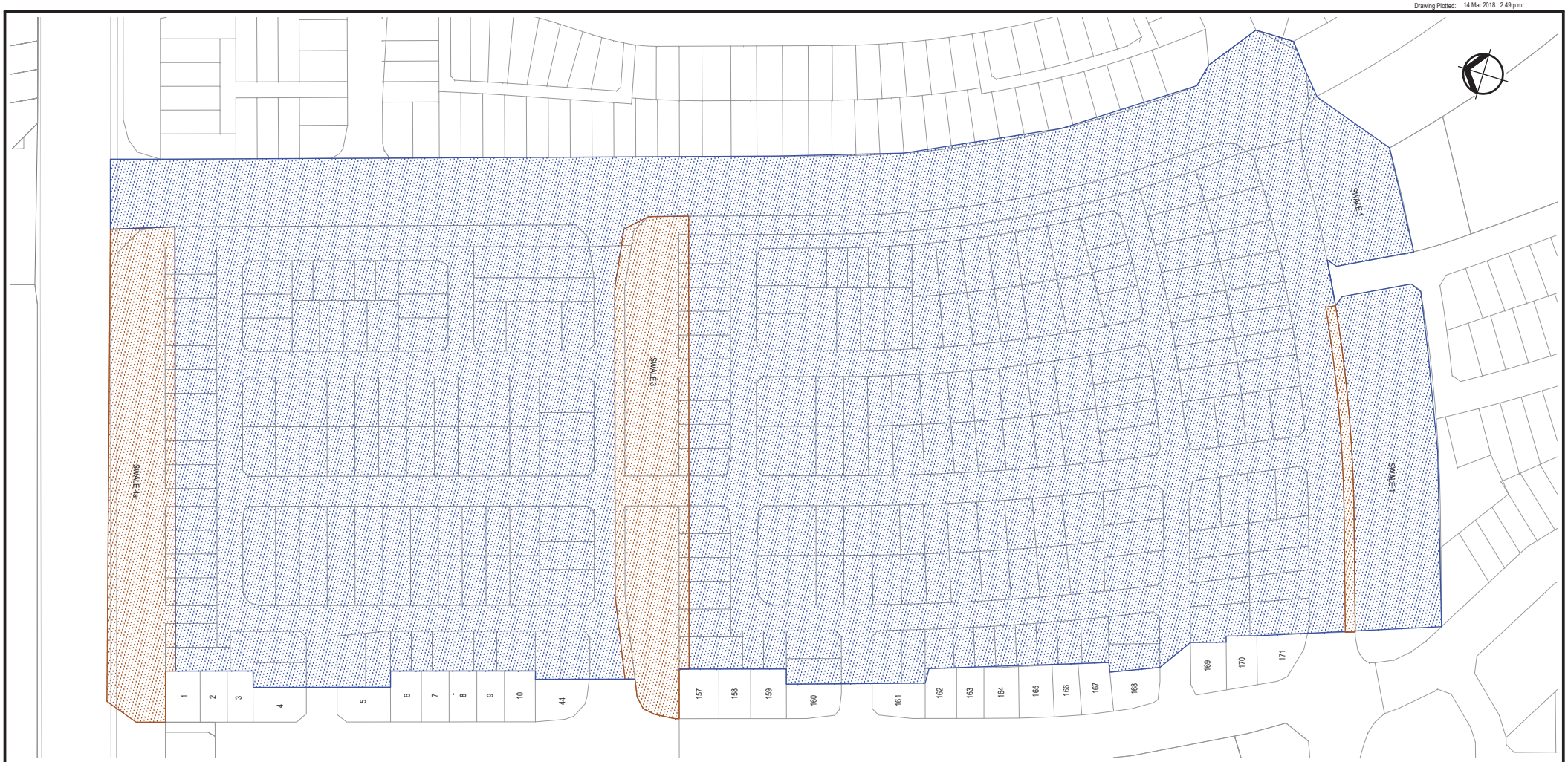
DP No:	TBC	Property Address	Greenhill Park, Stage 15, Hamilton	RC No:	11/2018/6632

Lot No:	Area (m^2)	Subsurface Data						Foundations		Building Restriction Line	S/W Specific Design	S/W Soakage	S/W Reticulated	Designated Building Platform	Minimum Building Platform	Compressible Soils	On-site Effluent Disposal	Consent Notice	Comment
		Shear Strength (kPa)	Subdivision Filling		Natural Topography Unworked	Natural Topography Earthworked		Conventional Shallow Foundation to NZS 3604:2011	Specific Design										
			Y/N	Depth (m)	Y/N	Y/N	Depth (mm)	Y/N/Ribraft	Y/N/NA										
407	460	Note 1	Y	0.5-2.2[2]	N	Y	200[2]	N	Y	N	Y	Y[4]	N	N	N	N	N	Y	
408	460	Note 1	Y	0.2-1.3[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
409	320	Note 1	Y	0.2-1.0[2]	N	Y	200[2]	Y- Ribraft	N	N	Y	Y[4]	N	N	N	N	N	Y	
410	315	Note 1	Y	0.6-1.2[2]	N	Y	200[2]	Y - Ribraft	N	N	Y	Y[4]	N	N	N	N	N	Y	
411	320	Note 1	Y	0.6-1.2[2]	N	Y	200[2]	Y - Ribraft	N	N	Y	Y[4]	N	N	N	N	N	Y	
412	349	Note 1	Y	0.3-1.3[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
413	349	Note 1	Y	0.5-1.2[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
414	349	Note 1	Y	0.8-1.1[2]	N	Y	200[2]	Y - Ribraft	N	N	Y	Y[4]	N	N	N	N	N	Y	
415	349	Note 1	Y	0.7-1.0[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
416	349	Note 1	Y	0.4-0.9[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
417	348	Note 1	Y	0.5-1.2[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
418	315	Note 1	Y	0.5-1.3[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
419	500	Note 1	Y	0.5-1.1[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
420	450	Note 1	Y	1.1-1.6[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
421	500	Note 1	Y	1.5-2.5[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
422	445	Note 1	Y	1.0-1.8[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
423	345	Note 1	Y	0.7-1.2[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
424	349	Note 1	Y	0.5-1.1[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
425	345	Note 1	Y	0.1-0.8[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
426	450	Note 1	Y	0.3-1.6[2]	N	Y	200[2]	Y - Ribraft	N	N	Y	Y[4]	N	N	N	N	N	Y	
427	450	Note 1	Y	0.1-0.8[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
428	405	Note 1	Y	0.2-0.3[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
429	405	Note 1	Y	0.1-0.4[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
430	450	Note 1	Y	0.2-1.3[2]	N	Y	200[2]	Y - Ribraft	N	N	Y	Y[4]	N	N	N	N	N	Y	
431	400	Note 1	Y	0.5-1.9[2]	N	Y	200[2]	Y - Ribraft	N	N	Y	Y[4]	N	N	N	N	N	Y	
432	400	Note 1	Y	0.5-1.6[2]	N	Y	200[2]	N	Y	N	Y	Y[4]	N	N	N	N	N	Y	
433	433	Note 1	Y	0.1-1.5[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	

Summary of Geotechnical Data for Individual Lots

NOTES:
1) Testing undertaken with Shera vane and Scala.
2) This considers approximately 200mm of topsoil removal across all lots prior to subdivision filling.
3) Setback required for properties adjacent swales. TC2 type foundation to be adopted within 1.5m-5m from top of slope, no foundations to be constructed <1.5m from top of slope, No specific engineer design required >5m from top of slope
4) Soakage testing required on individual lots. Ground soakage and stormwater storage devices required

Appendix III *Pre-Construction Assessment (exerts)*
BECA Area M Liquefaction Assessment Summary Plan



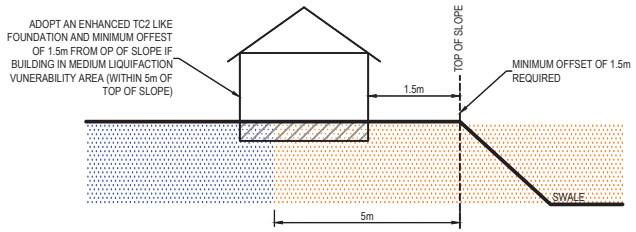
KEY

EXTENT OF AREA M

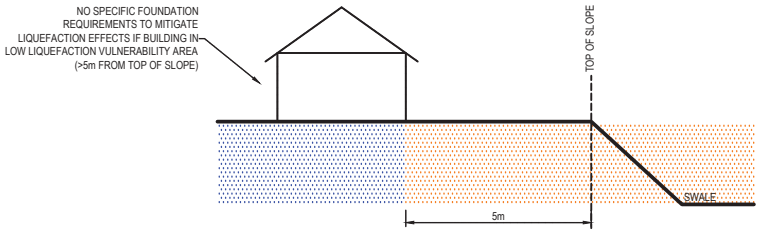
MEDIUM LIQUEFACTION VULNERABILITY
- MINOR TO MODERATE LIQUEFACTION-INDUCED GROUND DAMAGE IN 500 YEAR EARTHQUAKE
- TO MITIGATE LIQUEFACTION AND SEISMIC SLOPE INSTABILITY EFFECTS ADOPT LIQUEFACTION MITIGATION OPTION 1 OR 2.

LOW LIQUEFACTION VULNERABILITY
- NONE TO MINOR LIQUEFACTION-INDUCED GROUND DAMAGE IN 500 YEAR EARTHQUAKE.
- NO SPECIFIC REQUIREMENTS TO MITIGATE LIQUEFACTION EFFECTS.

LIQUEFACTION MITIGATION OPTION 1:



LIQUEFACTION MITIGATION OPTION 2:



FOR INFORMATION
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	FOR INFORMATION	SM	MP	PR	12.03.18

Drawing Originator:

Original Scale (A1) 1:3000
Reduced Scale (A3) 1:6000

Design	MLP	27.09.16	Approved For Construction*
Drawn	SM	12.03.18	
Dsg Verifier	EAR	12.03.18	
Dwg Check			Date

* Refer to Revision 1 for Original Signature

Client: Chedworth

Project:

Title: AREA M LIQUEFACTION ASSESMENT SUMMARY PLAN

Discipline: GEOTECHNICAL
Drawing No.: 3411915-GC-K068
Rev: A

Document No.: 3411915-GC-K068.DWG

DO NOT SCALE

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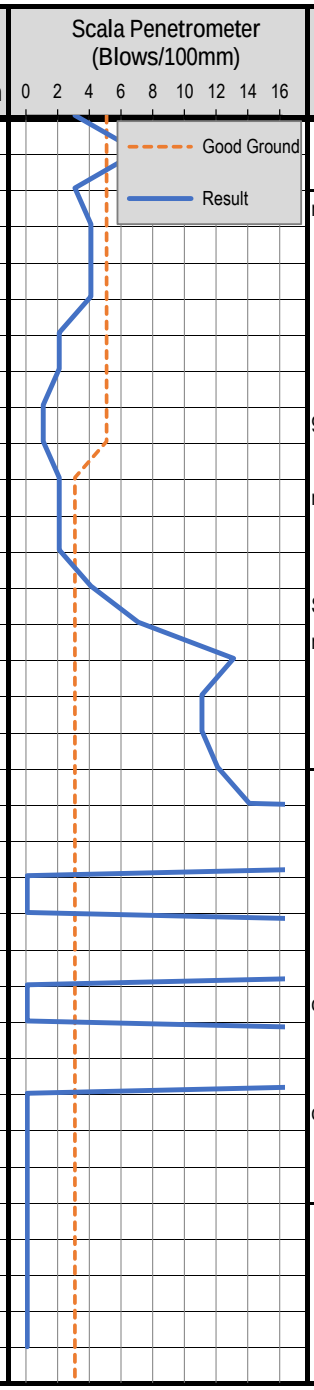
Appendix IV *Post-Construction Test Results*

Completion Testing by DCBE Ltd

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	1	Lot 407

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		3	FILL, respread topsoil, gravels	
200		7		
300		3	medium-dense to dense	
400		4		
500		4	Engineered FILL, silt, sand	
600		4	some angular gravels	
700		2	mixed light-brown, moist	
800		2		
900	140 / 23	1	900-1000mm minor topsoil	
1000		1		
1100		2	minor silt, minor gravels, orange-brown	
1200		2		
1300		2		
1400		4	Sand, silt, gravels	
1500		7	mixed browns, moist to very moist	
1600		13		
1700		11		
1800		11		
1900		12		
2000		14	SAND, some gravels, minor pumiceous materials	
2100		UTP	minor silt, grey, moist	
2200				
2300				
2400		UTP		
2500			dark grey-brown	
2600				
2700		UTP		
2800			dark grey, very moist	
2900				
3000				
3100			EOB @ 3.0m	
3200			Target Depth	
3300				
3400				
3500				



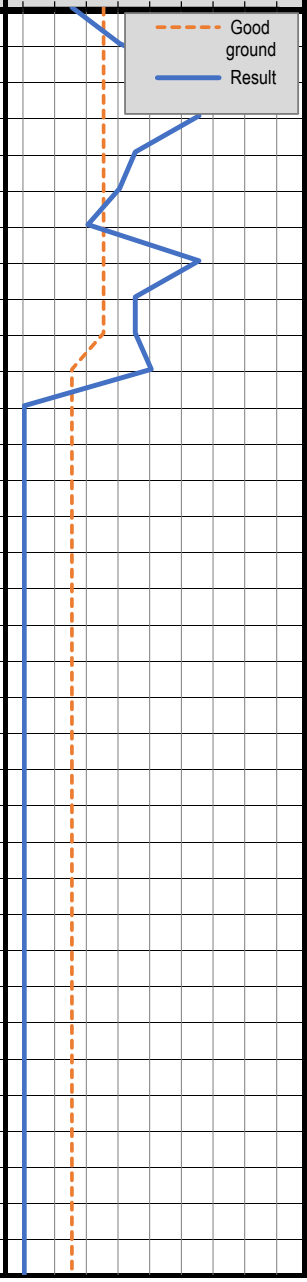
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1 Weather leading up to test was recent rain and cool weather. Fine during testing
2 Ground water was not encountered during testing
3 Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4 Shear Vane records include Re-moulded values where possible
5 Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	2	Lot 407b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		3		FILL, topsoil, gravels	
200		6			
300		11		hard	
400		11		Engineered FILL, silt, sand, gravel, mixed browns, moist	
500		7		hand auger to 900mm	
600		6			
700		4			
800		11		mixed grey-brown and orange-brown	
900		7			
1000		7			
1100		8			
1200				Sandy SILT, light orange-brown, moist	
1300					
1400				Silty SAND, orange-brown, moist	
1500				minor fine gravels	
1600				grey orange-brown	
1700				gravelly Sand,minor silt, grey	
1800					
1900					
2000					
2100					
2200				dark grey	
2300					
2400					
2500					
2600					
2700				EOB @ 2600mm	
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

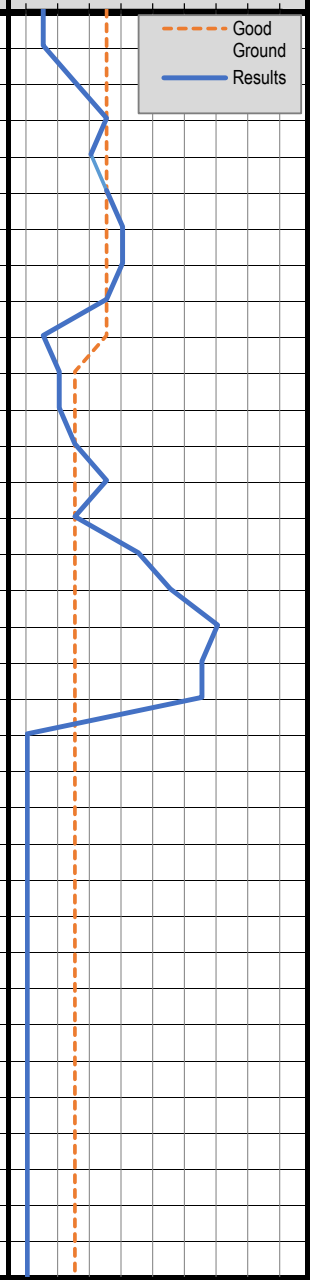
1 Weather leading up to test was recent rain and cool weather. Fine during testing
2 Ground water was not encountered during testing
3 Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4 Shear Vane records include Re-moulded values where possible
5 Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	3	Lot 408

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, topsoil, gravels	
200		1			
300		3			
400		5		hard	
500		4			
600	204+ / -	5		Engineered FILL, silt, minor sand	
700		6		dark orange-brown, moist	
800		6			
900		5		minor topsoil	
1000		1		Sand, silt, minor topsoil	
1100		2		mixed grey-brown and dark brown	
1200		2		loose	
1300		3		minor silt	
1400		5			
1500		3		some gravels	
1600		7			
1700		9		dense	
1800		12		SAND, some gravels, grey, moist	
1900		11			
2000		11			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

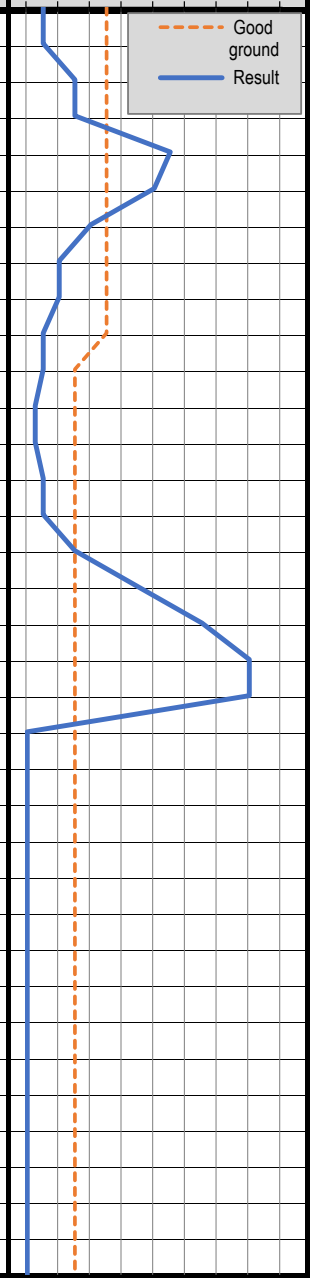
1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	4	Lot 409

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, topsoil, gravels	
200		1			
300		3		dense	
400		3		Engineered FILL, silt, minor sand	
500		9		mixed greys/browns, moist	
600		8		some gravels, sand	
700		4			
800		2		stiff	
900		2			
1000		1		SILT, light yellow-brown	
1100		1		minor orange-mottling, moist	
1200	70 / 18	0.5			
1300		0.5			
1400		1		creamy brown	
1500		1			
1600		3		dense	
1700		7			
1800		11		SAND, some silt, light-grey, moist	
1900		14		some gravels, minor silt, dark grey, very moist	
2000		14			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

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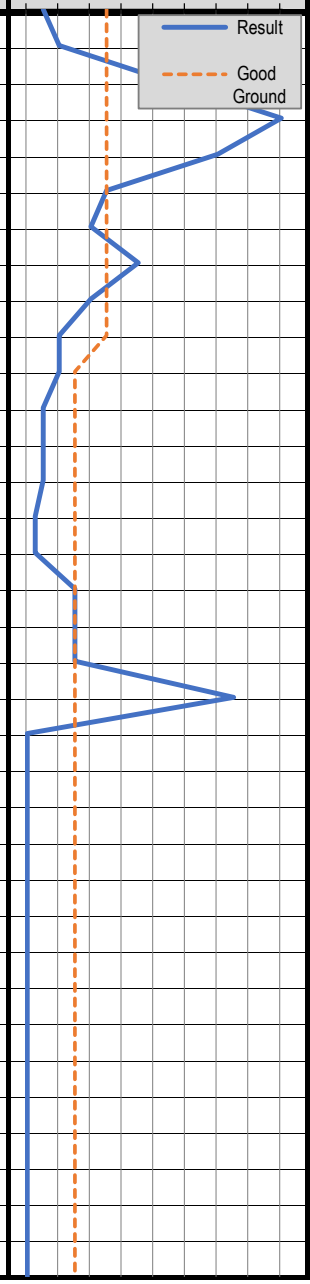
Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	5	Lot 410

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, topsoil, gravels	
200		2			
300		9		dense	
400		16			
500		12		Engineered FILL, silt, sand, some gravels	
600		5		mixed light-brown, moist	
700		4			
800		7		minor topsoil, minor gravels	
900		4			
1000		2			
1100		2			
1200	128 / 26	1		very stiff	
1300		1		SILT, minor topsoil, minor sand, orange-brown, moist	
1400		1		light-brown, minor orange-mottling	
1500		0.5			
1600		0.5		some orange-mottling	
1700		3		loose to dense	
1800		3		SAND, silt, crreamy brown, some mottling, moist	
1900		3		minor silt	
2000		13		gravels	
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



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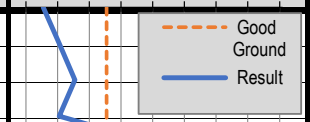
Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	6	Lot 411

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		1		FILL, topsoil, gravels	
200		2			
300		3		dense	
400		2			
500		10			
600		11		Engineered FILL, silt, sand, some gravels	
700		9		mixed light-brown, moist	
800		9			
900		10			
1000		2		minor topsoil	
1100		1		firm	
1200		1			
1300		1		SILT, light orange-brown	
1400	56 / 18	1		some dark orange-mottling, moist	
1500		1		very moist	
1600		2			
1700		2		dense	
1800		5			
1900		7		SAND, some gravels, minor silt, grey to dark grey	
2000		10		moist	
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



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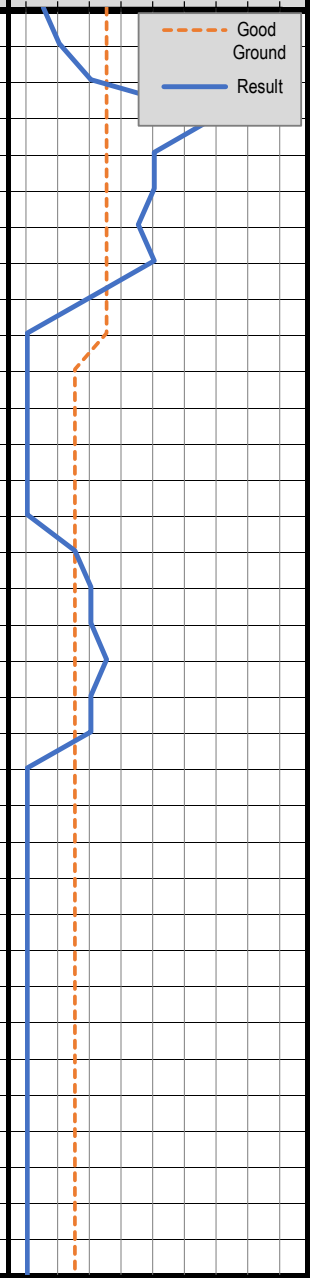
Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	7	Lot 412

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, topsoil, gravels	
200		2			
300		4		very stiff	
400		12			
500		8		Engineered FILL, silt, sand, some gravels	
600		8		mixed light-brown, moist	
700		7			
800		8			
900		4			
1000					
1100				very stiff	
1200	140 / 26				
1300				SILT, orange-brown, moist	
1400				clayey Silt, very moist	
1500	117 / 20			grading to creamy light-brown, some orange-mottling	
1600		3			
1700		4			
1800		4		minor mottling	
1900		5			
2000		4			
2100		4		EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



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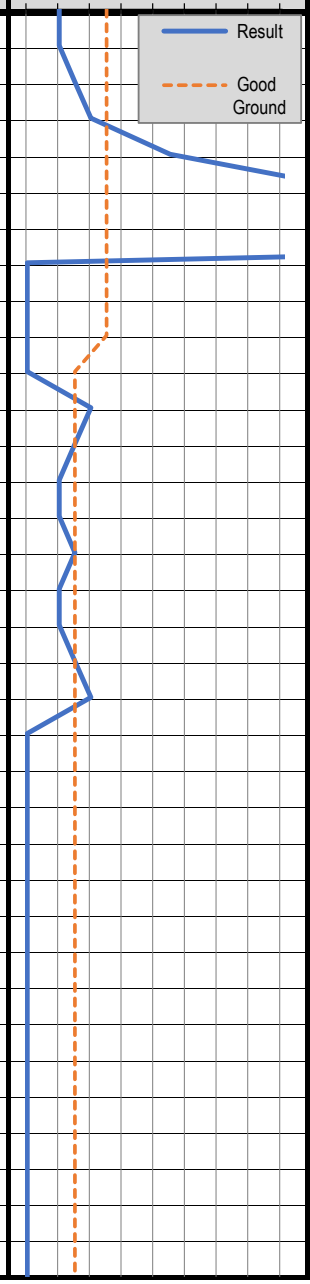
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	8	Lot 413

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		2	FILL, topsoil, gravels	
200		2		
300		3	hard	
400		4	Engineered FILL, silt, sand, some gravels	
500		9	mixed light-brown, moist	
600		21		
700		UTP	interbedded gangular gravels, minor topsoil	
800				
900			stiff	
1000			SILT, orange-brown, orange mottling	
1100			light grey-brown, minor mottling, moist	
1200	140 / 50	4		
1300		3	loose	
1400		2	SAND, some silt, light grey-brown, moist	
1500		2		
1600		3		
1700		2		
1800		2		
1900		3	some gravels, dark grey	
2000		4		
2100			EOB @ 2.0m	
2200			Target Depth	
2300				
2400				
2500				
2600				
2700				
2800				
2900				
3000				
3100				
3200				
3300				
3400				
3500				



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DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	9	Lot 414

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		4	Good Ground / Result	FILL, respread topsoil, gravels	
200		8			
300		7		medium-dense	
400		5			
500		4		Engineered FILL, silt, sand	
600		4		some angular gravels	
700		2		mixed light-brown, moist	
800		2		minor topsoil	
900		2			
1000		2			
1100		2		stiff	
1200	82 / 18	2		Fine sandy SILT, light orange-brown, moist	
1300					
1400					
1500				loose	
1600		3			
1700		3		Silty SAND, light-brown, moist	
1800		3		minor silt	
1900		3		some gravels, grey-brown	
2000		5			
2100		4		EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

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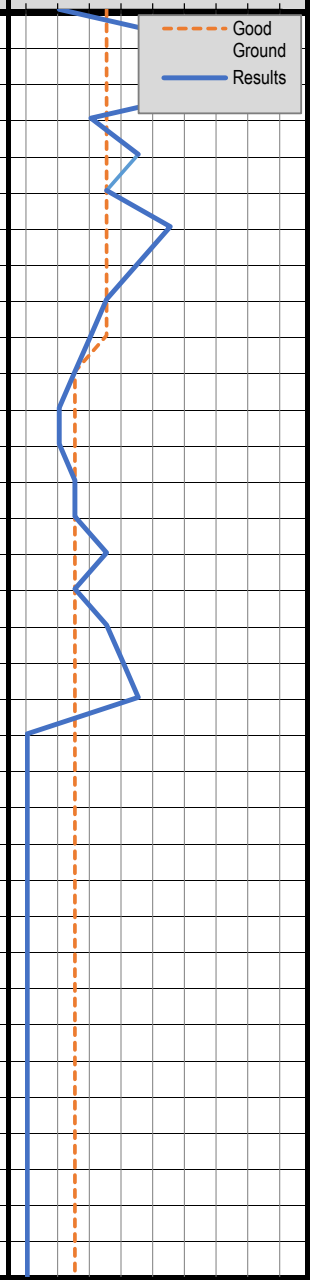
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	10	Lot 415

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		2		FILL, topsoil, gravels	
200		12			
300		14			
400		4		hard	
500		7		difficult to machine auger	
600	204+ / -	5		Engineered FILL, silt, minor sand	
700		9		some gravels, dark orange-brown, moist	
800		7			
900		5		minor topsoil	
1000		4			
1100		3		SILT, minor sand, brown, moist	
1200		2			
1300		2		medium-dense	
1400		3		Silty SAND, light-brown, moist	
1500		3		minor silt, light grey-brown	
1600		5			
1700		3			
1800		5		minor gravels, dark grey	
1900		6			
2000		7			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



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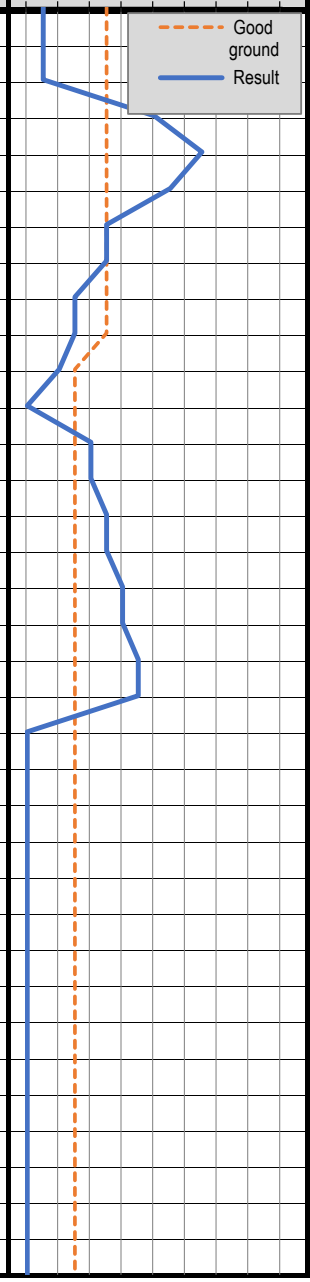
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	11	Lot 416



Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		1	FILL, topsoil, gravels	
200		1		
300		1	dense	
400		8	Engineered FILL, silt, minor sand	
500		11	mixed greys/browns, moist	
600		9	some gravels, sand	
700		5		
800		5		
900		3	SILT, orange-brown, moist	
1000		3	loose to medium-dense	
1100		2	Silty SAND, light yellow-brown	
1200			minor orange mottling, moist	
1300		4	minor silt, minor fine gravels, light grey-brown	
1400		4		
1500		5		
1600		5		
1700		6		
1800		6	some fine gravels, dark grey	
1900		7		
2000		7		
2100			EOB @ 2.0m	
2200			Target Depth	
2300				
2400				
2500				
2600				
2700				
2800				
2900				
3000				
3100				
3200				
3300				
3400				
3500				

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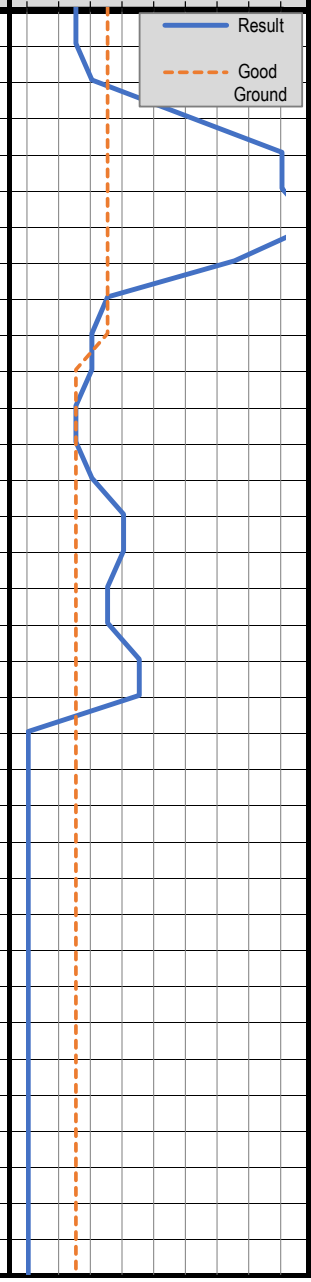
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	12	Lot 417

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		3		FILL, topsoil, gravels	
200		3			
300		4		dense	
400		10			
500		16		Engineered FILL, silt, sand, some gravels	
600		16		mixed light-brown, moist	
700		18			
800		13			
900		5		Sandy SILT, orange-brown, moist	
1000		4		medium dense	
1100		4		Silty SAND, minor pumiceous materials	
1200		3		light yellow-brown, some orange mottling, moist	
1300		3		trace silt, light grey-brown	
1400		4			
1500		6			
1600		6			
1700		5		some fine gravels, dark brown / grey	
1800		5			
1900		7			
2000		7			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



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DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	13	Lot 418

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		3	Good Ground / Result	FILL, topsoil, gravels	
200		3			
300		9		dense	
400		11		Engineered	
500		11		FILL, silt, sand, some gravels, mixed light-brown	
600		6		moist	
700		4			
800		4			
900	204+ / -	4		SILT, minor sand, orange-brown, moist	
1000		4		some sand	
1100		5		medium dense	
1200		3		Silty SAND, light yellow-brown, moist	
1300		3		minor silt, light grey-brown	
1400		4			
1500		5		trace silt, grey	
1600		5			
1700		6			
1800		5			
1900		4			
2000		6			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

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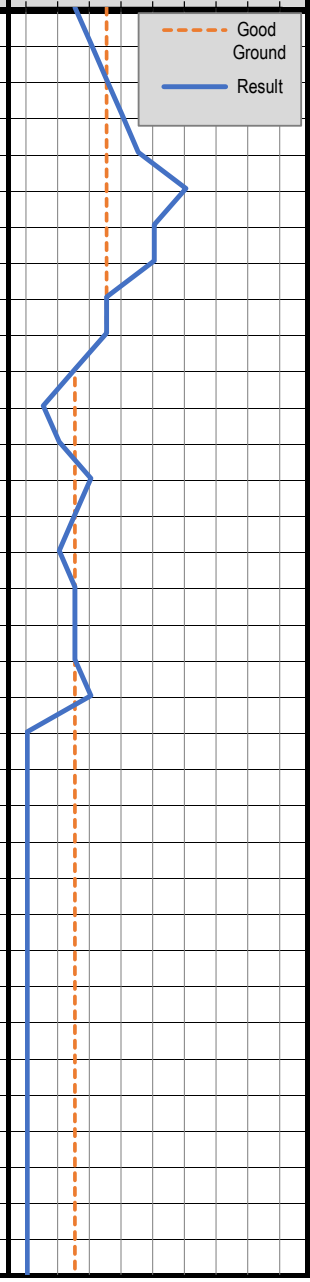
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	15/04/2021	14	Lot 419

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		3		FILL, topsoil, gravels	
200		4			
300		5		very stiff	
400		6			
500		7		Engineered	
600		10		FILL, silt, sand, some gravels, minor clay	
700		8		mixed greys, browns, orange-brown, moist	
800		8			
900		5			
1000		5		minor topsoil	
1100		3		very stiff	
1200	166 / 35	1			
1300		2		SILT, orange-brown, moist	
1400		4		clayey Silt, very moist	
1500		3		grading to creamy light-brown, some orange-mottling	
1600		2		loose	
1700		3		Silty SAND, grey-brown, minor mottling, moist	
1800		3		minor silt	
1900		3		dark grey	
2000		4			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



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DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	15/04/2021	15	Lot 420

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		2	Result / Good Ground	FILL, topsoil, gravels	
200		2			
300		3		dense to very dense	
400		10		Engineered FILL, silt, sand, some gravels	
500		11		mixed light-brown, moist	
600		7			
700		12		interbedded angular gravels, minor topsoil	
800		18		difficult to machine auger	
900		16			
1000		11			
1100		13			
1200		4		stiff	
1300		7		SILT, minor sand, yellow-brown, minor mottling	
1400		4		moist	
1500		4		medium dense	
1600		7		Silty SAND, yellow-brown, moist	
1700		7			
1800		6		minor silt	
1900		5		grey	
2000		6			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

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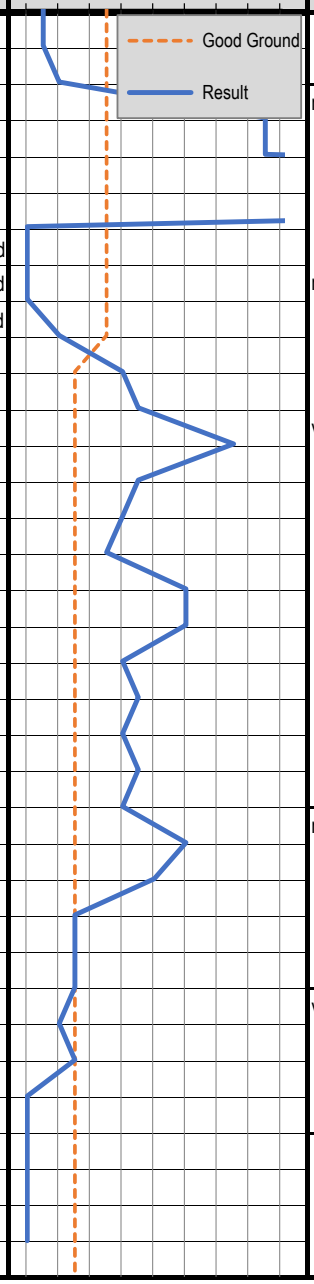
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	16	Lot 421

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		1	FILL, respread topsoil, gravels	
200		1		
300		2	medium-dense	
400		15		
500		15	Engineered FILL, silt, sand	
600		UTP	some angular gravels	
700		Not tested	mixed light-brown, moist	
800		Not tested	minor topsoil	
900		Not tested		
1000		2		
1100		6		
1200	82 / 18	7	varying dominance by Silt or Sand	
1300		13		
1400		7		
1500		6		
1600		5		
1700		10		
1800		10		
1900		6		
2000		7		
2100		6		
2200		7		
2300		6	medium dense	
2400		10	Silty SAND, minor fine gravels, light grey, very moist	
2500		8		
2600		3		
2700		3		
2800		3	very stiff	
2900		2	Fine sandy SILT, creamy light-brown	
3000		3	some orange mottling, moist	
3100				
3200			EOB @ 3.0m	
3300			Target Depth	
3400				
3500				



Notes:	EOB = End Of Borehole	UTP = Unable To Penetrate	UTE = Unable To Extract
1	Weather leading up to test was recent rain and cool weather. Fine during testing		
2	Ground water was not encountered during testing		
3	Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)		
4	Shear Vane records include Re-moulded values where possible		
5	Shear Vane Serial No.: 2086	Exp. Date: 2/06/2021	

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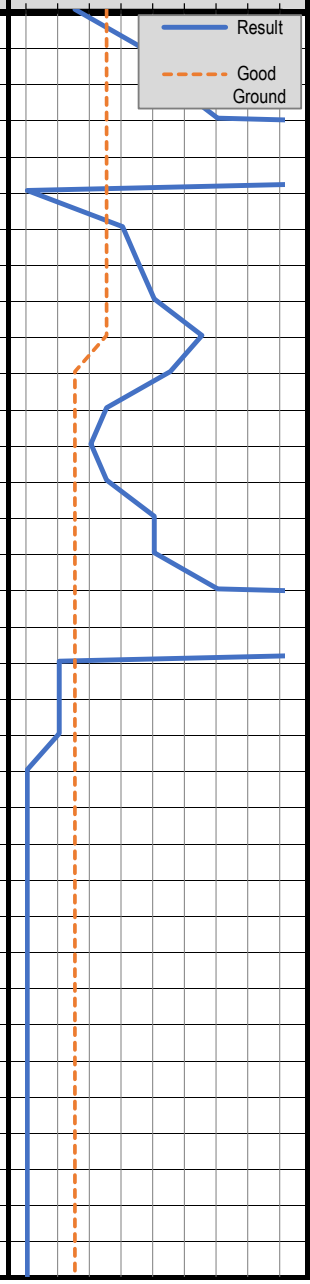
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	17	Lot 421b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		3		FILL, topsoil, gravels	
200		7			
300		9			
400		12		Engineered FILL, silt, sand, minor angular gravels mixed brown, moist	
500		UTP			
600					
700		6			
800		7			
900		8			
1000		11			
1100		9		some orange-brown	
1200		5			
1300		4			
1400		5			
1500		8			
1600		8			
1700		12		1700-1800mm significant angular gravels, silt and sand	
1800		UTP		dark grey-brown	
1900		2		SILT, minor fine snd, creamy light-brown, some mottling moist	
2000		2			
2100		2		minor clay, minor orange mottling	
2200					
2300					
2400					
2500				EOB @ 2400mm	
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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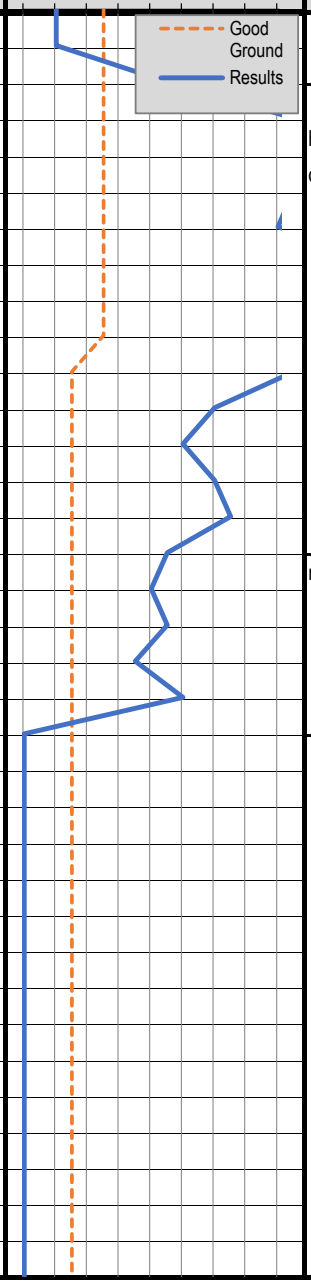
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	18	Lot 422a

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		2		FILL, topsoil, gravels	
200		2			
300		9			
400		17		hard	
500		19		difficult to machine auger	
600	204+ / -	17		Engineered FILL, silt, minor sand	
700		16		some gravels, dark orange-brown, moist	
800		22			
900		17			
1000		17			
1100		17			
1200		12			
1300		10			
1400		12			
1500		13			
1600		9		medium dense	
1700		8			
1800		9		Silty SAND, light-brown, moist to very moist	
1900		7			
2000		10			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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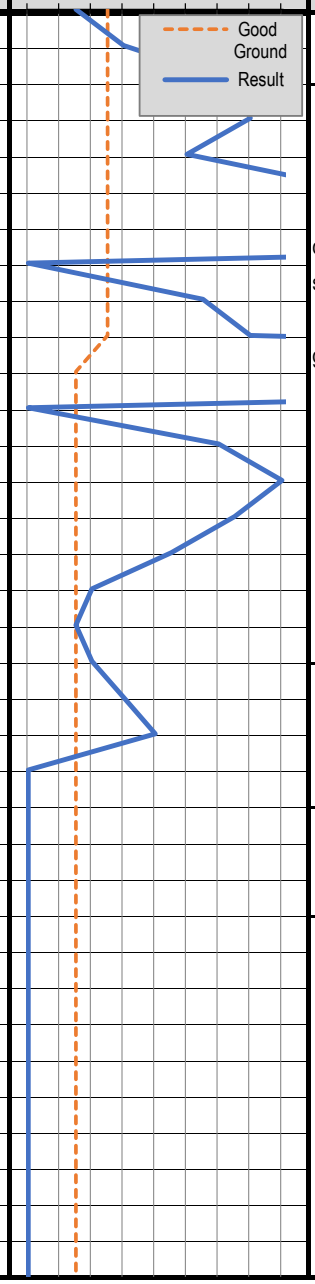
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	19	Lot 422b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		3		FILL, topsoil, gravels	
200		6			
300		13		Engineered FILL, silt, sand, angular gravels	
400		14		mixed brown, moist	
500		10			
600		21			
700		UTP		difficult to machine auger	
800				significant gravels	
900		11			
1000		14		grey-brown	
1100		UTP			
1200					
1300		12			
1400		16			
1500		13			
1600		9			
1700		4			
1800		3			
1900		4		SILT, minor fine sand, creamy light-brown, moist	
2000		6			
2100		8			
2200					
2300				Silty SAND, creamy light-brown, moist	
2400					
2500					
2600				EOB @ 2500mm	
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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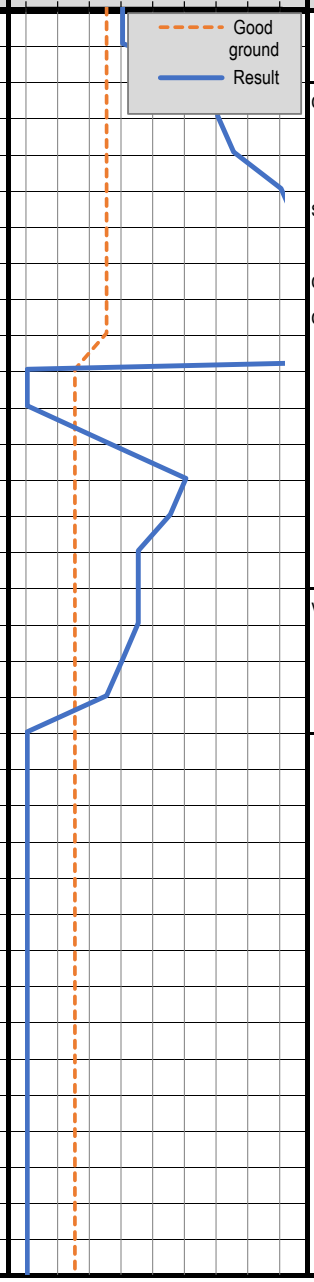
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	20	Lot 423

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		6		FILL, topsoil, gravels	
200		6			
300		12		dense	
400		12		Engineered FILL, silt, minor sand	
500		13		mixed greys/browns, moist	
600		16		some gravels, sand	
700		17			
800		18		difficult to machine auger	
900		20		difficult to extract	
1000		UTP			
1100					
1200					
1300		5			
1400		10			
1500		9			
1600		7			
1700		7		very stiff	
1800		7		SILT, some fine sand, light grey, very moist	
1900		6			
2000		5			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	21	Lot 424

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		5	Result / Good Ground	FILL, topsoil, gravels	
200		5			
300		7		dense	
400		7			
500		16		Engineered FILL, silt, sand, some gravels	
600		20		mixed light-brown, moist	
700		18			
800		12		some gravels, sand	
900		12			
1000		12		difficult to machine auger	
1100		7		difficult to extract	
1200		11			
1300		12			
1400		13		very stiff	
1500		7			
1600		4		SILT, some fine sand, light grey, very moist	
1700		3			
1800		3			
1900		3			
2000	187 / 41	6			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	22	Lot 425

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		7	Good Ground / Result	FILL, topsoil, gravels	
200		8			
300		15		dense	
400		16			
500		20		Engineered FILL, silt, sand, some gravels	
600		UTP		mixed light-brown, moist	
700				some gravels, sand	
800					
900		UTP		difficult to machine auger	
1000				difficult to extract	
1100					
1200		5		medium dense to dense	
1300		5			
1400		3		Silty SAND, orange-brown, moist	
1500		4		minor silt	
1600		6		some fine gravels	
1700		11			
1800		10			
1900		8			
2000		8			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1 Weather leading up to test was recent rain and cool weather. Fine during testing
2 Ground water was not encountered during testing
3 Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4 Shear Vane records include Re-moulded values where possible
5 Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	23	Lot 426

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		2	Good Ground / Result	FILL, topsoil, gravels	
200		3			
300	204+ / -	3		very stiff	
400		4			
500		4			
600	204+ / -	5		Engineered FILL, silt, minor clay, yellow-brown, moist	
700		4			
800		4			
900	204+ / -	4			
1000		6			
1100		6			
1200	204+ / -			hard	
1300					
1400				SILT, minor clay, dark orange-brown, moist	
1500	146 / 41			becoming yellow-brown	
1600					
1700					
1800					
1900				creamy pinkish brown	
2000	70 / 35				
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	24	Lot 427

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		2		FILL, topsoil, gravels	
200		2			
300	204+ / -	3		dense to very dense	
400		7		hand auger to 900mm	
500		4		Engineered FILL, silt, minor clay	
600	UTP	5		orange-brown, moist	
700		4			
800		5			
900	204+ / -	4			
1000		4		hard	
1100		4			
1200	204+ / -			SILT, minor clay, light grey-brown, moist	
1300				minor orange mottling	
1400					
1500	204+ / -				
1600					
1700				pinkish creamy-brown	
1800					
1900					
2000	181 / 70				
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Result
Good Ground

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1 Weather leading up to test was recent rain and cool weather. Fine during testing
2 Ground water was not encountered during testing
3 Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4 Shear Vane records include Re-moulded values where possible
5 Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	25	Lot 428

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100			Good Ground / Result	FILL, respread topsoil, gravels	
200					
300	204+ / -			hard Engineered FILL, clay, orange-brown, moist	
400					
500				hand auger to 900mm	
600	204+ / -				
700				hard SILT, minor fine sand, yellow-brown, moist	
800					
900	204+ / -				
1000					
1100					
1200	204+ / -				
1300				light yellow-brown, some orange-mottling	
1400					
1500	204+ / -			creamy grey-brown	
1600					
1700				1700-1800mm manganese mottling, yellow-brow, sandy texture	
1800					
1900				dark orange-brown, very moist	
2000	163 / 32				
2100				EOB @ 2.0m Target Depth	
2200					
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1 Weather leading up to test was recent rain and cool weather. Fine during testing
2 Ground water was not encountered during testing
3 Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4 Shear Vane records include Re-moulded values where possible
5 Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	26	Lot 429

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		2	Good Ground / Results	FILL, topsoil, gravels	
200		2			
300	UTP	3		SILT, orange-brown, moist	
400		3		hard	
500		3		very stiff	
600	UTP	5			
700		5		SILT,minor sand, yellow-brown, moist	
800		4			
900	204+ / -	5			
1000		6		clayey Silt, orange-brown, moist	
1100		5			
1200	204+ / -				
1300					
1400				1400-1700mm grey-brown	
1500	160 / 44				
1600					
1700				creamy-brown, heavy orange-mottling	
1800					
1900				minor mottling, very moist	
2000	204+ / -				
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	27	Lot 430

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		1	Good ground / Result	FILL, topsoil, gravels	
200		2			
300	UTP	2		hard	
400		3		Engineered FILL, silt, mixed browns, moist	
500		2		hand auger to 900mm	
600	163 / 53	3			
700		4			
800		3		hard	
900	204+ / -	2			
1000		3		SILT, minor clay, dark brown, moist	
1100		4			
1200	152 / 50				
1300					
1400				some clay, brown	
1500	204+ / -				
1600					
1700					
1800				light-brown	
1900					
2000	181 / 64				
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

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2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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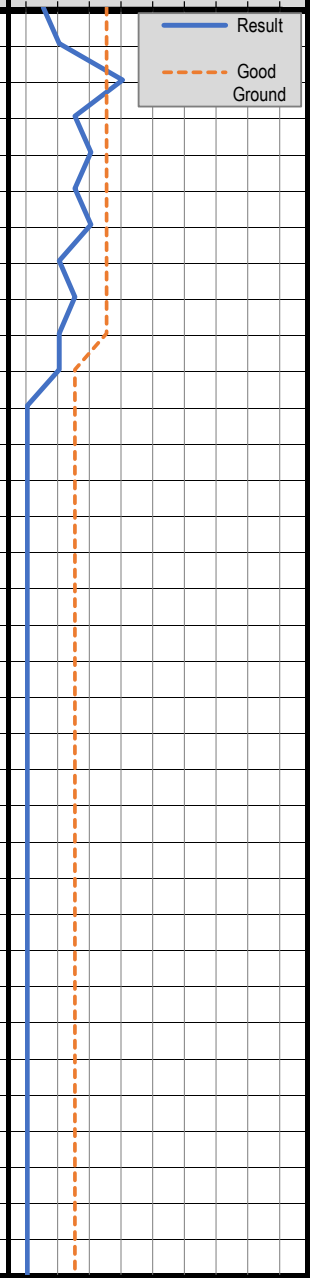
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	28	Lot 431a

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		1		FILL, topsoil, gravels	
200		2			
300	204+ / -	6		dense	
400		3			
500		4		Engineered FILL, silt, some sand, mixed creamy- light-brown	
600	204+ / -	3		moist	
700		4			
800		2		700-900mm minor topsoil	
900	204+ / -	3			
1000		2			
1100		2		minor fine sand	
1200	204+ / -			very stiff	
1300				SILT, minor fine sand, creamy light-brown, moist	
1400					
1500	UTP				
1600					
1700					
1800					
1900				Silty SAND, creamy orange-brown, moist	
2000				grey-brown, very moist	
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

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2. Ground water was not encountered during testing
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5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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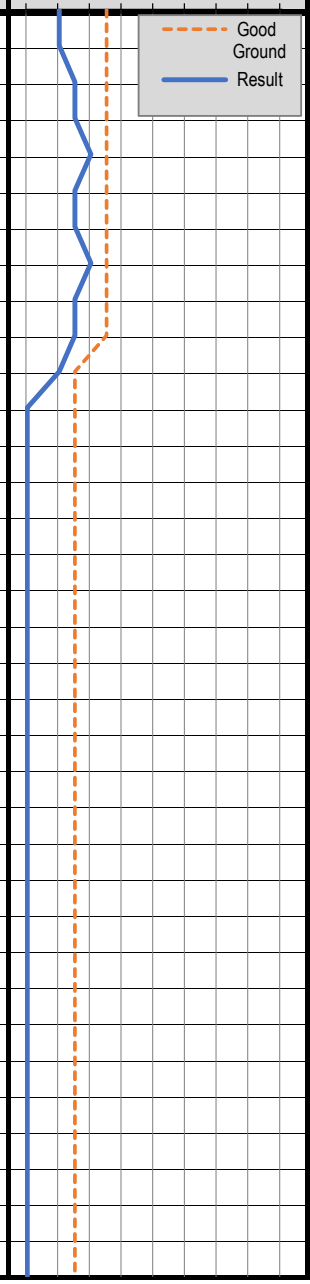
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	29	Lot 431b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		2		FILL, topsoil, gravels	
200		2			
300	166 / 76	3		very stiff	
400		3			
500		4		Engineered FILL, silt, minor clay, dark orange-brown	
600	204+ / -	3		moist	
700		3		minor angular gravels	
800		4		minor topsoil	
900	128 / 35	3			
1000		3			
1100		2			
1200	204+ / -				
1300					
1400					
1500	UTP			hard	
1600				Engineered FILL, silt, sand, some angular gravels	
1700				mixed dark-grey and grey-brown, moist	
1800					
1900					
2000	UTP				
2100					
2200					
2300				SAND, minor silt, dark grey, very moist	
2400					
2500				EOB @ 2400mm	
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	30	Lot 432a

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		1	Good Ground / Result	FILL, topsoil, gravels	
200		1			
300		1			
400		1			
500		1		layer of gravels	
600	UTP	2		medium dense to loose	
700		6			
800		4		Engineered FILL, silt, sand, mixed light greys, moist	
900	204+ / -	2			
1000		3			
1100		3			
1200	204+ / -				
1300					
1400					
1500					
1600		UTP		Engineered FILL, sand, gravels, silt, some topsoil	
1700				dark brown, moist	
1800					
1900		UTP			
2000					
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

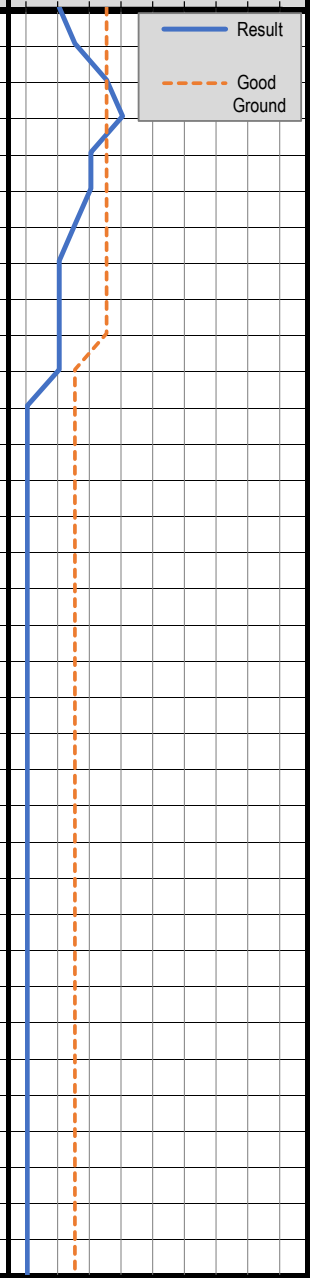
1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	31	Lot 432b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		2		FILL, topsoil, gravels	
200		3			
300	143 / 55	5		very stiff	
400		6			
500		4		Engineered FILL, silt, minor clay	
600	178 / 53	4		dark brown dark orange-brown, moist	
700		3			
800		2			
900	131 / 32	2			
1000		2			
1100		2			
1200	204+ / -				
1300					
1400					
1500	UTP				
1600					
1700				1700-1800mm some topsoil	
1800					
1900					
2000	70 / 26				
2100					
2200					
2300				Gravelly SAND, dark grey, very moist	
2400					
2500					
2600					
2700					
2800				EOB @ 2700mm	
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	32	Lot 433a

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		1	Good Ground / Result	FILL, respread topsoil, gravels	
200		2			
300		2		hard	
400		4		(engineer controlled) FILL, silt, sand, gravels	
500		5		mixed brown, moist	
600		12			
700		UTP			
800					
900					
1000					
1100					
1200	163 / 44				
1300				very stiff	
1400				Sandy SILT, creamy light-brown, moist	
1500					
1600		11			
1700		14		Silty SAND. Light-brown, moist	
1800		UTP		gravelly Sand, minor silt, dark grey, very moist	
1900					
2000					
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

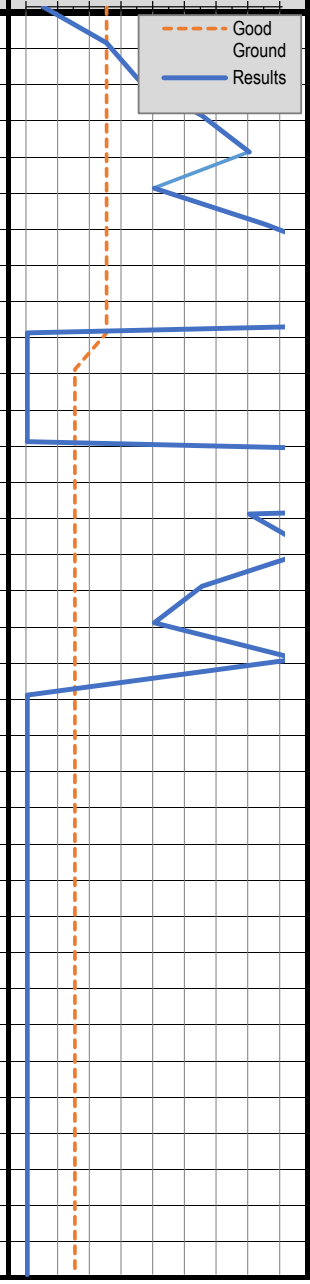
1. Weather leading up to test was recent rain and cool weather. Fine during testing
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Chedworth Properties, Area M, Stage 15		171738-AREA-M-S15-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	16/04/2021	33	Lot 433b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		1		FILL, topsoil, gravels	
200		5			
300		7		Engineered FILL, silt, sand, gravels	
400		11			
500		14		mixed brown and orange-brown, moist	
600		8			
700		15			
800		21		minor topsoil	
900		UTP			
1000					
1100					
1200					
1300					
1400		UTP			
1500		14		Engineered FILL, sand, gravels, minor silt	
1600		18		dark reddish brown, moist	
1700		11			
1800		8			
1900		17			
2000					
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was recent rain and cool weather. Fine during testing
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4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

Appendix V *Stormwater Management*
On-lot Water Efficiency Measures
Lot Levels (Minimum Lot Levels)

ON-LOT WATER EFFICIENCY MEASURES

WATER SUPPLY AND WASTEWATER DISPOSAL

The efficiency of taps, showers and toilets contribute to how much water we use. A reduction in the use of potable water by each house directly relates to the amount of wastewater generated (i.e. reduced water use results in reduced wastewater generation). To reduce potable water demand and the amount of wastewater generated, as a minimum, each house is required to install low demand fittings for kitchen, bathroom and laundry facilities.

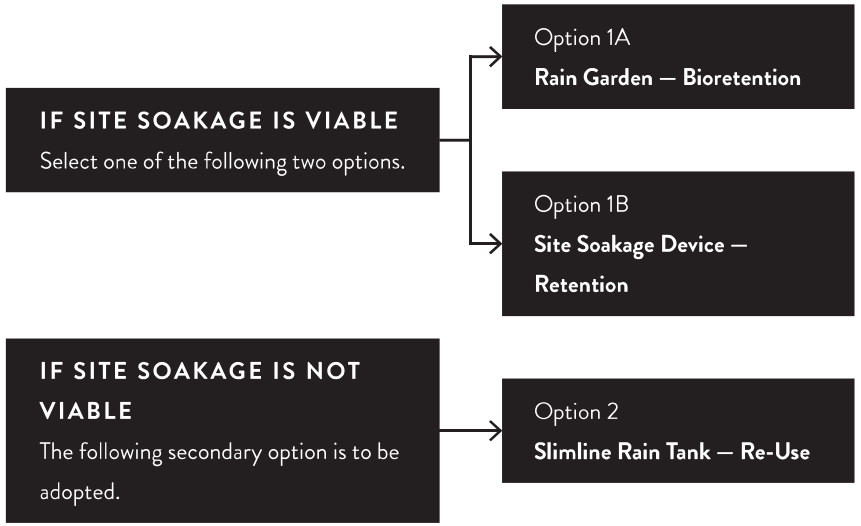
All household fittings are required to have a minimum 3 Star Rating.

STORMWATER DISPOSAL

Each lot is required to adopt an on-lot stormwater efficiency measure to ensure that surface water runoff is appropriately managed.

First, the suitability of the site for soakage needs to be assessed. Soakage is the process of helping stormwater soak into the ground using specially designed soakage devices. Soakage allows for the infiltration of stormwater into the soil which recharges the groundwater table below.

A site infiltration test is mandatory for all lots to confirm the in-situ soils are capable of achieving the minimum percolation rates. Refer to Hamilton City Council 'Three Waters Practice Note HCC 03: Soakage' for guidance on soil testing.



* Other alternative stormwater efficiency options will also be considered subject to approval by Greenhill Park and Hamilton City Council.

The selected option is to be designed by a suitably qualified Engineer and approved by the Hamilton City Council Building Control Unit. Refer to page 33 to 36 of these guidelines for further information of the design requirements for Options 1A, 1B & 2.

Hamilton City Council also encourages the installation of multiple stormwater efficiency options within a property, where practical.

Option 1A

RAIN GARDEN — BIORETENTION

Design to provide minimum 'live storage' retention for runoff from a 10mm rainfall event for trafficked hardstand areas.

The following table outlines indicative storage volumes and estimated rain garden areas for a range of lot sizes.

Lot Area (m^2)	**Live Storage Volume** (m^3)	**Rain Garden Area** (m^2)
300	0.8	4.1
350	0.9	4.7
400	1.1	5.4
450	1.2	6.1
500	1.4	6.8
550	1.5	7.4

Based on hardstand coverage equal to 30% of total lot area

KEY REQUIREMENTS

- Rain garden to be located to capture runoff from main hardstand areas within the lot (as much as practical).
- Maximum live storage depth to be 300mm (safety requirements to be considered when device is at maximum storage capacity).
- A channel and grate to be installed across vehicle entrance to capture hardstand run off and direct it to rain garden.
- Rain garden to be integrated with garden design (refer to page 34 for details).
- Overflow to be connected to stormwater connection provided.

FOR MORE INFORMATION

Refer to Hamilton City Council 'Three Waters Practice Note — HCC04 — Bio-retention (Rain Gardens)' for information on typical design requirements.

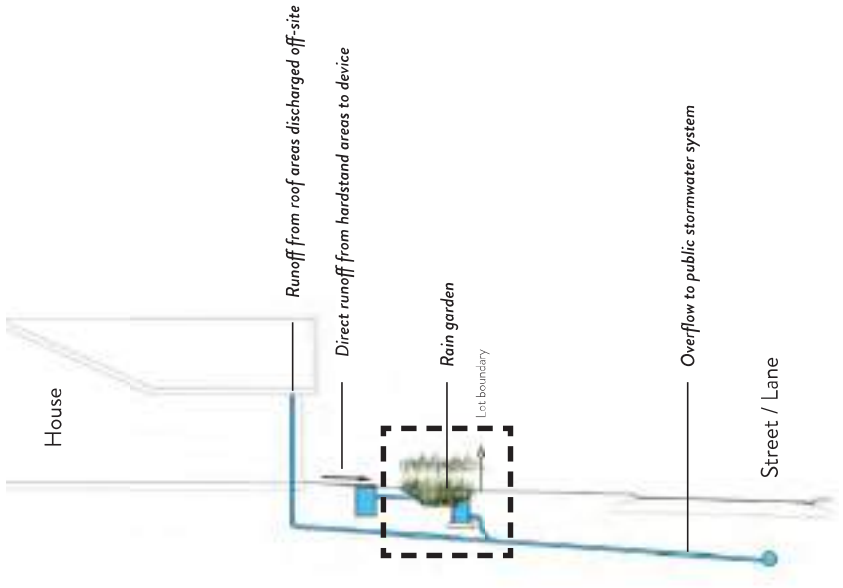


DIAGRAM — **7**
Rain Garden — Bioretention

GREENHILL PARK RAIN GARDEN PLANT LIST

Native plants are encouraged, but other exotic plant species which complement your front yard planting design could be used. Deciduous plants should not be used as their leaf-fall can block the outflow.

The plants selected need to —

- Be able to tolerate short periods of inundation and longer dry periods
- Be perennial rather than annual
- Have deep fibrous root systems and a spreading growth form
- Form a dense, weed-suppressing cover

Botanical Name	Common Name
Apodasmia similis	oioi
Blechnum penna-marina	alpine hard fern
Libertia ixioides	mikoikoi
Carex dipsacea	teasel sedge
Carex secta	purei
Carex virgata	pukio
Dianella nigra	turutu
Libertia grandiflora	mikoikoi
Lobelia angulata	panakenake
Pimelea prostrata	pinatoro

All rain garden plants to be a minimum grade of Pb 8 at the time of planting. * Other plant species can be approved at the discretion of the Design Review Panel.

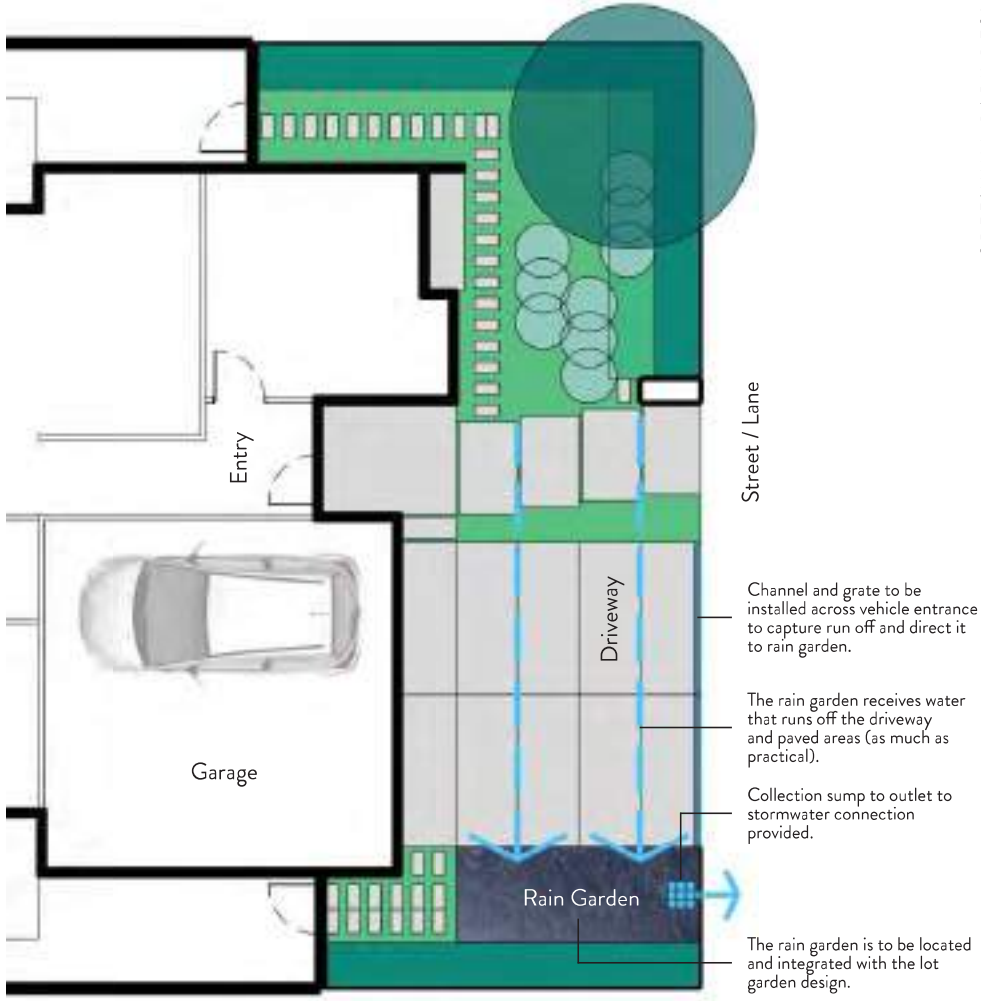


DIAGRAM — **8**

Rain Garden Typical Location

Option 1B

SITE SOAKAGE DEVICE – RETENTION

Design to provide minimum 'live storage' retention for runoff from a 10mm rainfall event for roof and trafficked hardstand areas.

The following table outlines indicative storage volumes for a range of lot sizes.

Lot Area (m^2)	**Live Storage Volume** (m^3)
300	2.2
350	2.6
400	3.0
450	3.4
500	3.7
550	4.1

Based on 80% site coverage (roof and hardstand areas)

KEY REQUIREMENTS

- Soakage device(s) to be located to capture runoff from roof downpipes and hardstand areas (as much as practical).
- A channel and grate to be installed across vehicle entrance to capture hardstand run off and direct it to soakage device.
- Soakage device to be integrated with garden design.
- Overflow to be connected to stormwater connection provided.

FOR MORE INFORMATION

Refer to Hamilton City Council 'Three Waters Practice Note HCC 03: Soakage' for information on typical design requirements.

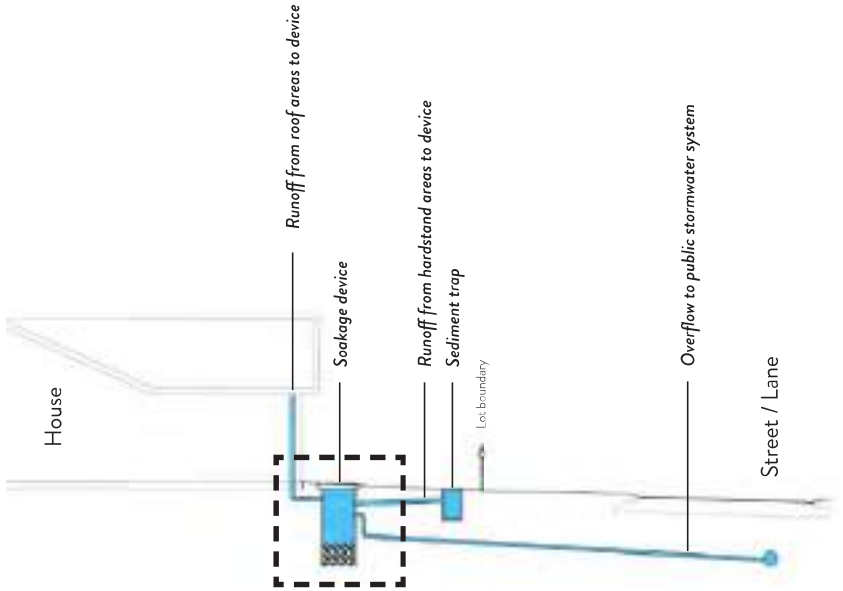


DIAGRAM – **9**
Site Soakage Device – Retention

Option 2

SLIMLINE RAIN TANK — RE-USE

The slimline rain tank is to be connected to a separate grey-water household re-use system with a minimum capacity of 5,000L.

KEY REQUIREMENTS

- Rain tank to be connected into a fully integrated grey-water re-use system within the main dwelling with connections to toilets, laundry and irrigation systems.
- All roof run-off is to be captured by rain tanks and available for re-use. Run-off from hardstand areas (driveways and paving) can be discharged directly into stormwater connection provided.
- A maximum of two (2) tanks may be used to achieve the required storage and align with downpipe locations.
- Overflow to be connected to stormwater connection provided.

LOCATION AND INSTALLATION

Slimline rain tanks should be placed in the rear or side yard of the lot as unobtrusively as possible. Care should be taken, where tanks are placed next to the house, to ensure they are placed adjacent to a blank wall and not infront of a window.

COLOUR

The colour of all rain tanks should match the colour of the homes exterior wall cladding adjacent to the tank.

* Colours that do not match but are complementary to the design and materials of the house can be approved at the discretion of the Design Review Panel.

FOR MORE INFORMATION

Refer to Hamilton City Council 'Three Waters Practice Note — HCC02 —Rainwater Re-use Systems (Rain Tanks)' for information on design requirements.

APPROVED RAIN TANK PRODUCTS

Tanksalot® Slimline Tank www.tanksalot.co.nz

ThinTanks™ NZ Slimline Rainwater Poly Tank www.thintanks.co.nz

* Other rain tank products will also be considered subject to approval by Greenhill Park.

Note below ground tanks (sealed tanks only) are also considered an appropriate design option and are pre-approved for use on this subdivision.

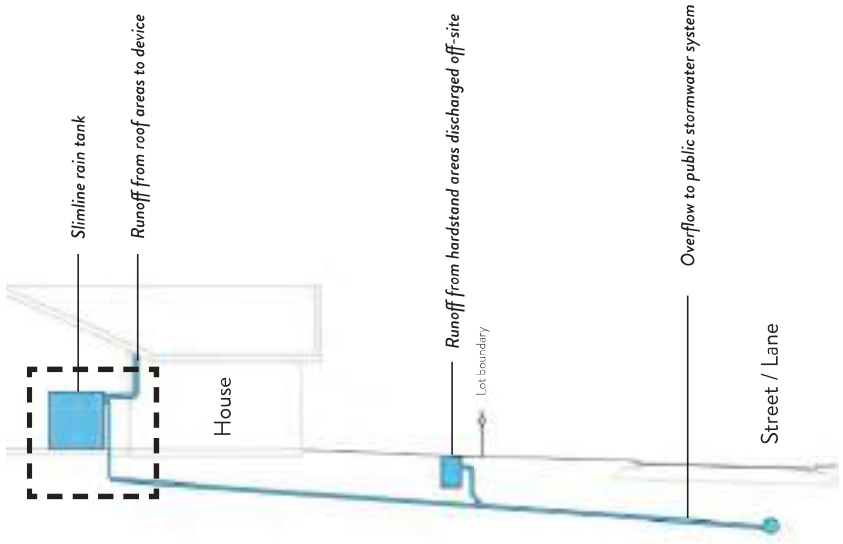


DIAGRAM —**10**

Slimline Rain Tank — Re-use

Lot	Stage	Minimum Lot Level (mRL)	1% AEP Flood Level (mRL)	Flood Level Reference	Calculated Freeboard (to Lot Level)
388	14	39.428	38.00	Swale 1D	1.428
389	14	39.316	38.00	Swale 1D	1.316
390	14	39.191	38.00	Swale 1D	1.191
391	14	39.419	38.00	Swale 1D	1.419
392	14	39.409	38.00	Swale 1D	1.409
393	14	39.325	36.40	Swale 3A	2.925
394	14	39.214	36.40	Swale 3A	2.814
395	14	39.130	36.40	Swale 3A	2.730
396	15	39.127	36.40	Swale 3A	2.727
397	15	39.222	36.40	Swale 3A	2.822
398	15	39.318	36.40	Swale 3A	2.918
399	15	39.429	38.00	Swale 1D	1.429
400	15	39.414	38.00	Swale 1D	1.414
401	15	38.923	38.00	Swale 1D	0.923
402	15	39.946	38.00	Swale 1D	1.946
403	15	39.233	38.00	Swale 1D	1.233
404	15	39.309	38.00	Swale 1D	1.309
405	15	39.278	38.00	Swale 1D	1.278
406	15	38.925	38.00	Swale 1D	0.925
407	15	39.339	38.00	Swale 1D	1.339
408	15	39.607	38.00	Swale 1D	1.607
409	15	39.358	36.46	Swale 3B	2.898
410	15	39.288	36.46	Swale 3B	2.828
411	15	39.215	36.46	Swale 3B	2.755
412	15	39.138	36.46	Swale 3B	2.678
413	15	39.057	36.46	Swale 3B	2.597
414	15	39.151	36.46	Swale 3B	2.691
415	15	39.231	36.46	Swale 3B	2.771
416	15	39.311	36.46	Swale 3B	2.851
417	15	39.391	36.46	Swale 3B	2.931
418	15	39.471	36.46	Swale 3B	3.011
419	15	39.544	38.00	Swale 1D	1.544
420	15	39.811	38.00	Swale 1D	1.811
421	15	39.930	35.46	Swale 3B	4.470
422	15	39.825	36.46	Swale 3B	3.365
423	15	39.741	36.46	Swale 3B	3.281
424	15	39.657	37.46	Swale 3B	2.197
425	15	39.571	38.46	Swale 3B	1.111
426	15	40.020	38.00	Swale 1D	2.020
427	15	39.908	38.00	Swale 1D	1.908
428	15	39.748	38.00	Swale 1D	1.748

Lot	Stage	Minimum Lot Level (mRL)	1% AEP Flood Level (mRL)	Flood Level Reference	Calculated Freeboard (to Lot Level)
429	15	39.696	38.00	Swale 1D	1.696
430	15	39.589	38.00	Swale 1D	1.589
431	15	39.472	38.00	Swale 1D	1.472
432	15	39.320	38.00	Swale 1D	1.320
433	15	39.144	38.00	Swale 1D	1.144

APPENDIX 2

Roading QA Documentation

Road Subgrade – 2(a)

- Drawing 21879-M-12-BR1 (in lieu of strings)
- Clegg Hammer Tests

Road Basecourse 2(b)

- Nuclear Densometer Results
- Benkelman Beam Test Results
- Basecourse Strings
- GAP40 Material Tests

Surfacing & RAMM Data 2(c)

- HCC pavement RAMM data
- Surfacing RAMM data

APPENDIX 2(a)

Roading QA Documentation

Road Subgrade

- Drawing 21879-M-15-BR1 (in lieu of strings)
- Clegg Hammer Tests

NOTES:

DEPTHS CALCULATED FROM ONLINE CONSTRACTORS MEASUREMENTS V DESIGN SURFACE.

TARGET DEPTHS
GOSSET AVENUE 0.23m
COULDSACK AVENUE 0.23m

MEASUREMENTS TAKEN TO BROWNROCK SUBGRADE IMPROVEMENT LAYER

N

STAGE 12

413 412 411 410 409 408 407 414 415 416 417 418 419 425 424 423 422 421 420 503 426 427 428 429 430 431 432 433

COULDSACK AVENUE

GOSSET AVENUE

WEBB DRIVE

S&L
Land Development
and Design Specialists
Ph. 07 577 6069
Email: info@sltga.co.nz
36 Kereiti Street, Mt Maunganui, Tauranga 3116
P.O. Box 231, Tauranga 3140
www.sltga.co.nz

Title

QUALITY ASSURANCE
COMPARISON OF BROWNROCK V DESIGN
ROADING LAYOUT
STAGE 15 AREA M

Rev	Description	Drn	Ckd	App	Date
AB	ISSUE TO HCC	SRC	BE	NF	03/21
0	INTERNAL REVIEW	SRC	BE	NF	03/21

	Name	Date		Name	Date
Surveyed	Online	03/2021	Designed		

Coordinate System: Mt Eden 2000 Circuit
Origin of Coordinates: ALP 3 DP 534481
Height Datum: Moturiki Vertical Datum 1953
Origin of Height: SS 507 SO 42451 RL = 44.04m

Original Scales @ A3: 1:500
Do Not Scale Dimensions

Status: AS-BUILT

Drawing No: 21879-M-15-BR1

Revision: AB

ONLINE CONTRACTORS

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Ph: 07 853 9422

COMPACTION - CLEGG TESTS

Contract	**GHP**	**Job No.**	
Site/Chainage	**Road 22 Stage 15**	**Date**	**27/01/021**
		Recorded by	**Bikal Baniya**
Material	**Brown Rock SIL**		

Chn	1m from kerb -	Centre Line	1m from kerb - Right	Notes
160			**23**	
170		**27**		
180	**34**			
190			**31**	
200		**24**		
210	**22**			
220			**31**	
230		**27**		
240	**24**			
250			**35**	
260		**30**		
270	**29**			

Source of conversion: Inferred CBR%=0.07(Impact Value)^2/100

Remarks

ONLINE CONTRACTORS

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Ph: 07 853 9422

COMPACTION - CLEGG TESTS

Contract	**GHP**	**Job No.**	
Site/Chainage	**Road 37 Stage 15**	**Date**	**22/01/021**
		Recorded by	**Bikal Baniya**
Material	**Brown Rock SIL**		

Chn	1m from kerb - Left	Centre Line	1m from kerb - Right	Notes
270	**30**			
280			**25**	
290	**22**			
300			**29**	
310	**27**			
320			**39**	
330	**23**			
340			**36**	

Source of conversion: Inferred CBR%=0.07(Impact Value)^2/100

Remarks

ONLINE CONTRACTORS

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Hamilton, 3256
Email: Todd@onlinecontractors.co.nz
Ph: 07 853 9422

COMPACTION - CLEGG TESTS

Contract	**GHP**	**Job No.**	
Site/Chainage	**Road 38 Stage 15**	**Date**	**22/01/021**
		Recorded by	**Bikal Baniya**
Material	**Brown Rock SIL**		

Chn	1m from kerb -	Centre Line	1m from kerb - Right	Notes
130	**27**			
140			**24**	
150	**21**			
160			**31**	
170	**27**			
180			**26**	
190	**20**			
200			**33**	

Source of conversion: Inferred CBR%=0.07(Impact Value)^2/100

Remarks

APPENDIX 2(b)

Roading QA Documentation

Road Basecourse

- Nuclear Densometer Results
- Benkelman Beam Test Results
- Basecourse Strings
- GAP40 Material Tests
- S&L/HCC Correspondence regarding kerb and pavement changes

Online Contractors 2016 Ltd
PO Box 21187, Rototuna
HAMILTON 3256

CONSTRUCTION DIMENSIONS

Contract GHP **Job No.**

Site **Date** 15/03/021

Stage Stage 15 Road 22 **Recorded by** Bikal Baniya

Material AP40 **Subgrade TNZ F/1 tolerance** -20 mm 0 mm

Subbase TNZ B/2 tolerance -25 mm 5 mm

String lift 200 mm **Basecourse TNZ B/2 tol.** -5 mm 15 mm

	Depth below stringline level							
	Left			Centre		Right		
Chn.	Edge 6m	4m	2m	Left 0m	Right 0m	2m	4m	Edge 6m
160			230	230		230		
170			235	230		225		
180			230	230		230		
210			240	240		240		
220			245	230		235		
230			245	240		235		
240			240	235		235		
250			235	235		240		
260			240	235		230		

Online Contractors 2016 Ltd
PO Box 21187, Rototuna
HAMILTON 3256

CONSTRUCTION DIMENSIONS

Contract GHP **Job No.**

Site **Date** 15/03/021

Stage Stage 15 Road 37 **Recorded by** Bikal Baniya

Material AP 40 **Subgrade TNZ F/1 tolerance** -20 mm 0 mm

Subbase TNZ B/2 tolerance -25 mm 5 mm

String lift 200 mm **Basecourse TNZ B/2 tol.** -5 mm 15 mm

	Depth below stringline level								
	Left			Centre		Right			
Chn.	Edge 6m	4m	2m	Left 0m	Right 0m	2m	4m	Edge 6m	Offset
280			240	230		230			
290			240	230		235			
300			235	230		235			
310			235	235		235			
320			230	230		235			
330			235	230		230			
340			230	230		230			

Online Contractors 2016 Ltd PO
Box 21187, Rototuna
HAMILTON 3256

CONSTRUCTION DIMENSIONS

Contract GHP **Job No.**

Site **Date** 15/03/021

Stage Stage 15 Road 38 **Recorded by** Bikal Baniya

Material AP40 **Subgrade TNZ F/1 tolerance** -20 mm 0 mm

Subbase TNZ B/2 tolerance -25 mm 5 mm

String lift 200 mm **Basecourse TNZ B/2 tol.** -5 mm 15 mm

	Depth below stringline level								
	Left			Centre		Right			
Chn.	Edge 6m	4m	2m	Left 0m	Right 0m	2m	4m	Edge 6m	Offset
200			240	240		240			
190			235	230		230			
180			230	230		230			
170			230	230		230			
160			235	235		230			
150			230	230		230			
140			230	230		230			
130			230	225		230			

ONLINE CONTRACTORS

P O Box 21187, Rototuna
Hamilton, 3256
Email: Todd@onlinecontractors.co.nz
Ph: 07 853 9422

COMPACTION - CLEGG TESTS

Contract	**GHP**	**Job No.**	
Site/Chainage	**Road 22 Stage 15**	**Date**	**12/03/021**
		Recorded by	**Bikal Baniya**
Material	**AP 40**		

Chn	1m from kerb - Left	Centre Line	1m from kerb - Right	Notes
160	**51**			
170		**59**		
180			**43**	
210	**48**			
220		**49**		
230			**53**	
240	**56**			
250		**47**		
260			**42**	

Source of conversion: Inferred CBR%=0.07(Impact Value)^2/100

Remarks

ONLINE CONTRACTORS

P O Box 21187, Rototuna
Hamilton, 3256
Email: Todd@onlinecontractors.co.nz
Ph: 07 853 9422

COMPACTION - CLEGG TESTS

Contract	**GHP**	**Job No.**	
Site/Chainage	**Road 37 Stage 15**	**Date**	**12/03/021**
		Recorded by	**Bikal Baniya**
Material	**AP40**		

Chn	1m from kerb - Left	Centre Line	1m from kerb - Right	Notes
280	**47**			
290		**54**		
300			**53**	
310	**42**			
320		**58**		
330			**49**	
340	**46**			

Source of conversion: Inferred CBR%=0.07(Impact Value)^2/100

Remarks

ONLINE CONTRACTORS

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Hamilton, 3256
Email: Todd@onlinecontractors.co.nz
Ph: 07 853 9422

COMPACTION - CLEGG TESTS

Contract	**GHP**	**Job No.**	
Site/Chainage	**Road 38 Stage 15**	**Date**	**12/03/021**
		Recorded by	**Bikal Baniya**
Material	**AP 40**		

Chn	1m from kerb - Left	Centre Line	1m from kerb - Right	Notes
200	**55**			
190		**44**		
180			**57**	
170	**50**			
160		**42**		
150			**47**	
140	**56**			
130		**48**		

Source of conversion: Inferred CBR%=0.07(Impact Value)^2/100

Remarks

BASECOURSE COMPACTION CONTROL
TNZ - B2 TEST RESULTS

Project :	Greenhill Park	Sample description :	GAP40 ex Stevensons Tauhei		
Location :	Road 22	Nuclear densometer no :	33576		
Client :	Online Contractors Ltd	Solid density (tested) :	2.73	t/m³	
Contractor :	Online Contractors Ltd	Max dry density (tested) :	2.22	t/m³	
Tested by :	G Tait	Opt. water content (tested) :	7.5	%	
Date tested :	15/03/21				

Project No :	2-68015.00
Lab Ref No :	HA7050_1
Client Ref No :	Road 22

Nuclear Densometer Test Results

Test Number	1	2	3	4	5		6	7	8	9	10	11	12	
Test Position	150	160	170	180	188	200	210	220	230	240	250	260	270	
Offset	LHS	RHS	LHS	RHS	LHS		RHS	LHS	RHS	LHS	RHS	LHS	RHS	
Probe Depth (mm)	B/S	B/S	B/S	B/S	B/S		B/S	B/S	B/S	B/S	B/S	B/S	B/S	
Wet Density (t/m³)	2.28	2.29	2.28	2.26	2.26	Concrete Intersection	2.32	2.31	2.26	2.28	2.27	2.27	2.26	
Dry Density (t/m³)	2.19	2.18	2.17	2.16	2.17		2.20	2.19	2.15	2.17	2.16	2.18	2.15	
Water Content (%)	4.0	5.3	4.9	4.7	4.5		5.3	5.4	4.9	5.3	4.7	4.4	5.1	
% of MDD	99	98	98	97	98		99	99	97	98	97	98	97	
% Saturation	44	57	52	49	47		61	60	50	55	49	47	52	

Oven Corrected Test Results

Dry Density (t/m³)														
Water Content (%)														
% of MDD														
% Saturation														

Test Methods	Notes
Insitu Density : NZS 4407 : 2015, Test 4.3 for Backscatter Mode	Max dry density from : HA6289/2 **Sept 2020** (WSP Lab)

IANZ Approved Signatory

Designation : *Laboratory Manager*

Date reported : 16/03/21

Date : 16/03/21

ACCREDITED IANZ TESTING LABORATORY

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

WSP
Hamilton (Fox St)
Quality Management Systems Certified to ISO 9001

4 Fox Street
Private Bag 3057, Waikato Mail Centre, 3240,
Hamilton, New Zealand

Telephone +64 7 858 2870
Website www.wsp.com/nz

BASECOURSE COMPACTION CONTROL
TNZ - B2 TEST RESULTS

Project :	Greenhill Park	Sample description :	GAP40 ex Stevensons Tauhei		
Location :	Road 37	Nuclear densometer no :	33576		
Client :	Online Contractors Ltd	Solid density (tested) :	2.73	t/m³	
Contractor :	Online Contractors Ltd	Max dry density (tested) :	2.22	t/m³	
Tested by :	G Talt	Opt. water content (tested) :	7.5	%	
Date tested :	15/03/21				

Project No :	2-68015.00
Lab Ref No :	HA7050_2
Client Ref No :	Road 37

Nuclear Densometer Test Results

Test Number	1	2	3	4	5	6	7							
Test Position	280	270	260	250	240	230	220							
Offset	RHS	LHS	RHS	LHS	RHS	LHS	RHS							
Probe Depth (mm)	B/S	B/S	B/S	B/S	B/S	B/S	B/S							
Wet Density (t/m³)	2.27	2.24	2.29	2.22	2.34	2.26	2.31							
Dry Density (t/m³)	2.18	2.16	2.18	2.13	2.25	2.17	2.20							
Water Content (%)	4.2	4.1	5.2	4.4	5.0	4.2	5.1							
% of MDD	98	97	98	96	100	98	99							
% Saturation	45	42	56	42	61	45	58							

Oven Corrected Test Results

Dry Density (t/m³)														
Water Content (%)														
% of MDD														
% Saturation														

Test Methods	Notes
Insitu Density : NZS 4407 : 2015, Test 4.3 for Backscatter Mode	Max dry density from : HA6289/2 **Sept 2020** (WSP Lab)

IANZ Approved Signatory

Designation : *Laboratory Manager*

Date : 16/03/21

Date reported : 16/03/21

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Website www.wsp.com/nz

BASECOURSE COMPACTION CONTROL
TNZ - B2 TEST RESULTS

Project :	Greenhill Park	Sample description :	GAP40 ex Stevensons Tauhei		
Location :	Road 38	Nuclear densometer no :	33576		
Client :	Online Contractors Ltd	Solid density (tested) :	2.73	t/m³	
Contractor :	Online Contractors Ltd	Max dry density (tested) :	2.22	t/m³	
Tested by :	G Tait	Opt. water content (tested) :	7.5	%	
Date tested :	15/03/21				

Project No :	2-68015.00
Lab Ref No :	HA7050_3
Client Ref No :	Road 38

Nuclear Densometer Test Results

Test Number	1	2	3	4	5	6	7	8	9					
Test Position	200	190	180	170	160	150	140	130	120					
Offset	RHS	RHS*	LHS	RHS	LHS	RHS	LHS	RHS	LHS					
Probe Depth (mm)	B/S	B/S	B/S	B/S	B/S	B/S	B/S	B/S	B/S					
Wet Density (t/m³)	2.30	2.23	2.31	2.33	2.24	2.31	2.27	2.31	2.30					
Dry Density (t/m³)	2.16	2.16	2.19	2.21	2.16	2.19	2.16	2.20	2.18					
Water Content (%)	5.8	3.6	5.2	5.5	3.9	5.2	5.0	4.6	5.3					
% of MDD	98	97	99	100	97	99	97	99	98					
% Saturation	62	37	58	64	40	58	52	53	57					

Oven Corrected Test Results

Dry Density (t/m³)														
Water Content (%)														
% of MDD														
% Saturation														

Test Methods	Notes
Insitu Density : NZS 4407 : 2015, Test 4.3 for Backscatter Mode * Grader on LHS	Max dry density from : HA6289/2 **Sept 2020** (WSP Lab)

IANZ Approved Signatory

Designation : *Laboratory Manager*

Date : 16/03/21

Date reported : 16/03/21

ACCREDITED IANZ TESTING LABORATORY

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BENKELMAN BEAM
TEST REPORT

Project :	Greenhill - Stage 15
Location :	Road 22
Client :	Online Contractors (2016) Limited
Contractor :	Online Contractors (2016) Limited
Test method :	TNZ T/1 1977
Pavement type :	GAP40
Pavement temp °C :	-
Weight on rear axle:	8.3 tonnes
Tested by :	J. Waru-Savage, C. Brown

Project No :	2-68015.00
Lab Ref No :	HA7058a
Client Ref :	

Test Results

Location	Deflections (mm)				Comments
Metres	Left WT	Right WT			
160	0.80				
170		0.80			Concrete Pad
180	0.94				
190		0.90			
200					
210		0.60			
220	0.80				
230		1.06			
240	1.06				
250		0.92			
260	1.10				
270		0.80			
	1.06				90 Percentile calculated for all data in columns 1 to 2

Deflection Statistical Analysis (For all deflections)

Maximum (mm): 1.10	Minimum (mm) : 0.60	Average (mm): 0.89

Note: Results in italics have a difference between Intermediate and Final readings that are greater than 3 (refer TNZ T/1 1977).

Date tested : 17/03/2021
Date reported : 17/03/2021

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*
Date : 17/03/2021

ACCREDITED IANZ TESTING LABORATORY

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3240, Hamilton, New Zealand

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Website www.wsp.com/nz

BENKELMAN BEAM TEST REPORT

Project :	Greenhill - Stage 15
Location :	Road 37
Client :	Online Contractors (2016) Limited
Contractor :	Online Contractors (2016) Limited
Test method :	TNZ T/1 1977
Pavement type :	GAP40
Pavement temp °C :	-
Weight on rear axle:	8.3 tonnes
Tested by :	J. Waru-Savage, C. Brown

Project No :	2-68015.00
Lab Ref No :	HA7058b
Client Ref :	

Test Results

Location Metres	Deflections (mm) Left WT	Right WT			Comments
280	0.70				
290		0.96			
300	0.68				
310		1.14			
320	0.90				
330		0.90			
340	0.84				
	1.03				90 Percentile calculated for all data in columns 1 to 2

Deflection Statistical Analysis (for all deflections)

Maximum (mm): 1.14	Minimum (mm) : 0.68	Average (mm): 0.87

Note: Results in italics have a difference between Intermediate and Final readings that are greater than 3 (refer TNZ T/1 1977)

Date tested : 17/03/2021
Date reported : 17/03/2021

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*
Date : 17/03/2021

ACCREDITED IANZ TESTING LABORATORY

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Telephone +64 7 858 2870
Website www.wsp.com/nz

BENKELMAN BEAM TEST REPORT

Project :	Greenhill - Stage 15
Location :	Road 38
Client :	Online Contractors (2016) Limited
Contractor :	Online Contractors (2016) Limited
Test method :	TNZ T/1 1977
Pavement type :	GAP40
Pavement temp °C :	-
Weight on rear axle:	8.3 tonnes
Tested by :	J. Waru-Savage, C. Brown

Project No :	2-68015.00
Lab Ref No :	HA7058c
Client Ref :	

Test Results

Location Metres	Deflections (mm) Left WT	Right WT			Comments
120	0.86				
130		0.70			
140	0.36				
150		0.56			
160	0.56				
170		0.50			
180	0.64				
190		0.80			
200	0.70				
	0.81				90 Percentile calculated for all data in columns 1 to 2

Deflection Statistical Analysis (for all deflections)

Maximum (mm): 0.86	Minimum (mm) : 0.36	Average (mm): 0.63

Note: Results in italics have a difference between intermediate and Final readings that are greater than 3 (refer TNZ T/1 1977).

Date tested : 17/03/2021
Date reported : 17/03/2021

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*
Date : 17/03/2021

ACCREDITED IANZ TESTING LABORATORY

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

WSP
Hamilton (Fox St)
Quality Management Systems Certified to ISO 9001

4 Fox Street
Private Bag 3057, Waikato Mail Centre,
3240, Hamilton, New Zealand

Telephone +64 7 856 2870
Website www.wsp.com/nz

APPENDIX 2(c)

Roading QA Documentation

Surfacing & RAMM Data

- HCC pavement RAMM data
- Surfacing RAMM data

F3.8 RAMM CHIPSEAL DATA

(to be completed for each seal layer on each road section)

Subdivision	GREENHILL PARK – STAGE 15
Road No / Name	Road 37 + 38 + 22
Start m	CH 380 (Rd 37) Start Description EOS STAGE 12
End m	CH 170 (Rd 22) End Description EOS STAGE 14
Width	5.5

Contractor	online Contractors 2016 Ltd.
Date of Work	01/04/21
Seal Type (circle one)	(1 Coat) / Racked in Chipseal / 2 Coat / Other:
Seal Reason	Waterproofing First Coat / Second Coat / Asphalt Membrane
Area Sealed (m²)	1360 m²
Chip Grading (e.g. 3/5)	Grade 4
Binder Type (e.g. B180/200)	CRS-2 - Emulsion.
Chip Source Company	J. Swap.
Chip Source Quarry	Paotaogroa.
Total Volume of Binder Used (Hot) (Litres)	1904 liters.
Temperature of Binder (°C)	80° C
Residual Binder Rate (L/m²)	1.0 L/m²
Cutter (e.g. 3 pph Kero)	–
Other Additives with concentrations (e.g. Polymer modification RS1, 3%)	
Sealing Notes (e.g. Weather, Temp)	–

Surfacing Chip PSV testing form attached ☐

F3.7 RAMM ASPHALT DATA

(to be completed for each seal layer on each road section)

Subdivision: online - greenhill - stage 15

Road No / Name: ROAD 37 + 28 + 22

Start m: CH 330 (RD 37) Start Description: EOS STAGE 12

End m: CH 170 (RD 22 End Description: EOS STAGE 14

Width: 5.5

Contractor: online Contractors.

Date of Work: 01/04/21

Asphalt Type (circle one): (AC) / OGPA / SMA / Other

Grading (e.g. M/10 DG10): DG-7

Area Surfaced (m^2): 1360 m^2

Average thickness (mm): 36 mm.

Laying Temperature (°C): 149°C

Tack Coat Residual Application Rate (L/m^2): 1.0 L/m^2

Additional Notes (e.g. Weather, Temp, Polymer Modification): Dry.

F3.9 RAMM PAVEMENT DATA

(to be completed for each road section)

Subdivision: GREENHILL PARK STAGE 15

Road No / Name: ROAD 22 (GOSSET AVE)

Start m: 160 Start Description: LOT 407

End m: 260 End Description: ROAD 37 (COULDSACK AVE)

Width: 5.5m

Basecourse

Date Completed: 12-3-2021

Thickness: 200 mm

Grading: GAP 40

Quarry: STEVENSONS TAUHEI

Sub-Base

Date Completed: NIL

Thickness:

Grading:

Quarry:

Undercut / Imported Subgrade (If Required)

Whole Site: (Yes) / No

Length: 100

Width: 6 m

Depth: 500 mm

Backfill Material: BLUE BROWN ROCK

Subgrade

CBR: (Without)

Stabilisation: 15

Material:

Stabilised?: (No) / Cement / Lime

% Stabilising Agent:

Stabilised Depth:

Stabilised CBR:

F3.9 RAMM PAVEMENT DATA

(to be completed for each road section)

Subdivision: GREENHILL PARK STAGE 15

Road No / Name: ROAD 37 (COULDSACK AVE)

Start m: 280 Start Description: ROAD 22 (GOSSET AVE)

End m: 340 End Description: LOT 425

Width: 5.5m.

Basecourse

Date Completed: 12-3-2021

Thickness: 200 mm

Grading: GAP 40

Quarry: STEVENSONS TAUHEI

Sub-Base

Date Completed: NIL

Thickness:

Grading:

Quarry:

Undercut / Imported Subgrade (If Required)

Whole Site: (Yes) / No

Length: 60 m

Width: 6m

Depth: 500mm

Backfill Material: BLUE BROWN ROCK

Subgrade

CBR: (Without) Stabilisation: 15

Material:

Stabilised? (No) / Cement / Lime

% Stabilising Agent:

Stabilised Depth:

Stabilised CBR:

F3.9 RAMM PAVEMENT DATA

(to be completed for each road section)

Subdivision: GREENHILL PARK STAGE 15

Road No / Name: ROAD 38 (GOSSET AVE)

Start m: 130 Start Description: LOT 414

End m: 200 End Description: ROAD 22 (GOSSET AVE)

Width:

Basecourse

Date Completed: 12-3-2021

Thickness: 200mm

Grading: GAP 40

Quarry: STEVENSONS TAUHEI

Sub-Base

Date Completed: NIL

Thickness:

Grading:

Quarry:

Undercut / Imported Subgrade (If Required)

Whole Site: (Yes) / No

Length: 70 m

Width: 6 m

Depth: 500 mm

Backfill Material: BLUE BROWN ROCK

Subgrade

CBR: 15

Stabilisation: (Without)

Material:

Stabilised? (No) / Cement / Lime

% Stabilising Agent:

Stabilised Depth:

Stabilised CBR:

APPENDIX 3

Water Construction QA Documentation

- Pipe Laying Checklists F6.2
- Final Inspection Checklist F6.3
- Laboratory Water Test Results
- Pressure Test Results

Waikato Local Authority
SHARED SERVICES

WATER SUPPLY PIPE LAYING CHECKLIST

SITE ADDRESS: GREENHILL PARK - STAGE 15.

NAME OF DEVELOPER: CHEDWORTH PROPERTIES LTD.

NAME OF QUALIFIED WATER SERVICE PERSON: TE RUKI SHEEHAN

Location: Pipe length *(Intersection to Intersection and side)*	FROM	RD 37 S12	RD 22	RD 22	RD 36 S12	RD 36 S12
	TO	RD 22	RD 37	RD 37	RD 22	RD 22
		Tick if satisfactory	Tick if satisfactory	Tick if satisfactory	Tick if satisfactory	Tick if satisfactory
Pipe size, pressure rating, material, acceptable products checked *(attach photo of manufacturer's stamp on pipe)*		150 PN12.5	150 PN12.5	63 PN12.5	150 PN12.5	63 PN12.5
Foundation support attached		✓	✓	✓	✓	✓
Dynamic cone penetrometer (DCP) results available		✓	✓	✓	✓	✓
If under-cutting required, note metreage and DCP:		✓	✓	✓	✓	✓
Bedding type and backfill material *(DCP results for road crossings and driveways attached?)* YES ☐ NO ☒		SAND	SAND	SAND	SAND	SAND
Valves and hydrants not in carriageway		✓	✓	✓	✓	✓
Alignment and cover		✓	✓	✓	✓	✓
All service connections in place *(Table of water meter and backflow preventor numbers with corresponding lot numbers attached?)* YES ☑ NO ☐		✓	✓	✓	✓	✓
Connections and Toby Box correctly located horizontally and vertically *(as per standard drawings)*		✓	✓	✓	✓	✓
Hydrants and valves positioned correctly *(as per standard drawings)*		✓	✓	✓	✓	✓
Thrust blocks installed		✓	✓	✓	✓	✓
Pipelines flushed		✓	✓	✓	✓	✓
As-built measurements taken prior to backfill		✓	✓	✓	✓	✓
Pressure test witnessed and passed by Council representative		✓	✓	✓	✓	✓

	Tick if satisfactory	Tick if satisfactory	Tick if satisfactory	Tick if satisfactory	Tick if satisfactory
Bacto sample taken and passed by Council representative PRIOR to connection to the live Council main	✓	✓	✓	✓	✓
Connection to live main by Council *(unless specifically approved)*	✓	✓	✓	✓	✓

Main left charged at FAC level of _____ ppm

ONLINE CONTRACTORS	P. HOPPER	7-4-21
~~Developer~~/Contractor's name *(please print)*	~~Developer~~/Contractor's signature	Date signed
Council Representative's name *(please print)*	**Council Representative's signature**	**Date signed**

Waikato Local Authority
SHARED SERVICES

WATER SUPPLY FINAL INSPECTION CHECKLIST

~~DEVELOPER~~/CONTRACTOR ONLINE CONTRACTORS LTD

SITE/LOCATION GREENHILL PARK – STAGE 15

SUB _____/_____ CONTRACT NO

Developer to verify checklist prior to meeting	Developer Check	Council Rep Check
1. All lines flushed out	✓	
2. All backfilling complete and reinstated	✓	
3. Water Supply Design Confirmation form completed		
4. Water Supply Pipe Laying Checklist completed	✓	
5. Final as-built plans attached for site inspection		
6. Connected to existing supply by Council *(refer* Water Supply Pipe Laying Checklist*)*	✓	
Site Meeting:		
1. Valves and hydrants correctly marked *(Refer standard drawings for indicator posts)*	✓	
2. FH pavement markers in place	✓	
3. Fire hydrant lids painted	✓	
4. Valve and FH boxes installed correctly *(Refer standard drawings)*	✓	
5. All valves checked on/off	✓	
6. Remedial work required? Yes *(please list)* (N)		

ONLINE CONTRACTORS — ~~Developer~~/Contractor's name *(please print)*

D. HOPPIN — ~~Developer~~/Contractor's signature

8-4-21 — Date signed

Council Representative's name *(please print)*

Council Representative's signature

Date signed

Test Certificate

Date	4 Feb 2021
Project Name	Greenhill
Plan No.	Stage 15, 14 & 13
Contractor	Online
Contractors Rep	Tyler Maihi
HCC Officer	M. Gibbs

Water Reticulation

Pressure Test – Water 171-PSI [✓] or 1200kPa [ ] for 15mins

Test Name	PN Rating	Pipe Size	Start	Finish	Length	Result
PT	16	150m 63mm	10.45	11.00	600m	Pass

Signature HCC Test Official	
Signature Contractor Representative	

Hamilton City Council

Sample ID	Sample Type	Site	Date Sampled	Date Received	Parameter Name	Result	Units	Lab	Status
2021000845	Hamilton Reticulation Maintenance	150 Greenhill west	16/02/2021	16/02/2021	Heterotrophic Plate Count 35ºC	<1	cfu/mL	HCC Laboratory	e
2021000845	Hamilton Reticulation Maintenance	150 Greenhill west	16/02/2021	16/02/2021	Temperature On Arrival	17.1	ºC	HCC Laboratory	e
2021000845	Hamilton Reticulation Maintenance	150 Greenhill west	16/02/2021	16/02/2021	E.coli Enumerated	<1	MPN/100mL	HCC Laboratory	e
2021000845	Hamilton Reticulation Maintenance	150 Greenhill west	16/02/2021	16/02/2021	Total Coliforms Enumerated	<1	MPN/100mL	HCC Laboratory	e
2021000845	Hamilton Reticulation Maintenance	150 Greenhill west	16/02/2021	16/02/2021	Time Sampled (client)	06:30		Client	e
2021000845	Hamilton Reticulation Maintenance	150 Greenhill west	16/02/2021	16/02/2021	Sampler (client)	Lance Parkes		Client	e
2021000846	Hamilton Reticulation Maintenance	150 Greenhill North	16/02/2021	16/02/2021	Heterotrophic Plate Count 35ºC	5	cfu/mL	HCC Laboratory	e
2021000846	Hamilton Reticulation Maintenance	150 Greenhill North	16/02/2021	16/02/2021	Temperature On Arrival	16.8	ºC	HCC Laboratory	e
2021000846	Hamilton Reticulation Maintenance	150 Greenhill North	16/02/2021	16/02/2021	E.coli Enumerated	<1	MPN/100mL	HCC Laboratory	e
2021000846	Hamilton Reticulation Maintenance	150 Greenhill North	16/02/2021	16/02/2021	Total Coliforms Enumerated	<1	MPN/100mL	HCC Laboratory	e
2021000846	Hamilton Reticulation Maintenance	150 Greenhill North	16/02/2021	16/02/2021	Time Sampled (client)	06:35		Client	e
2021000846	Hamilton Reticulation Maintenance	150 Greenhill North	16/02/2021	16/02/2021	Sampler (client)	Lance Parkes		Client	e
2021000847	Hamilton Reticulation Maintenance	150 Greenhill East	16/02/2021	16/02/2021	Heterotrophic Plate Count 35ºC	<1	cfu/mL	HCC Laboratory	e
2021000847	Hamilton Reticulation Maintenance	150 Greenhill East	16/02/2021	16/02/2021	Temperature On Arrival	17.7	ºC	HCC Laboratory	e
2021000847	Hamilton Reticulation Maintenance	150 Greenhill East	16/02/2021	16/02/2021	E.coli Enumerated	<1	MPN/100mL	HCC Laboratory	e
2021000847	Hamilton Reticulation Maintenance	150 Greenhill East	16/02/2021	16/02/2021	Total Coliforms Enumerated	<1	MPN/100mL	HCC Laboratory	e
2021000847	Hamilton Reticulation Maintenance	150 Greenhill East	16/02/2021	16/02/2021	Time Sampled (client)	06:45		Client	e
2021000847	Hamilton Reticulation Maintenance	150 Greenhill East	16/02/2021	16/02/2021	Sampler (client)	Lance Parkes		Client	e

APPENDIX 4

Wastewater Construction and QA Records

- Wastewater Pipe Laying Checklist F5.2
- Wastewater Manhole Checklist F5.3
- Wastewater trench Backfill Summary Checklist F5.4
- Wastewater Final Inspection Checklist F5.6
- Pressure Test Results
- CCTV submission email

F5.2 WASTEWATER PIPE LAYING CHECKLIST

Engineering plan number(s): 21879-M-13-S01					
Name of certified drainlayer: Zane Millar					
Location: Pipe length (MH To MH)	FEH to 18.5	18.5 to 18.4	18.4 to 18.3	18.3 to 18.1	18.3 to 18.2

Pipe Laying Checks

Trench Safety (d) Shield (e) Batter (f) Other	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐
Pipe size, quality, manufacturer, on acceptable products list	☑	☑	☑	☑	☑
Set out – Surveyors name Online – Set out checked	☑ ☐	☑ ☑	☑ ☑	☑ ☑	☑ ☑
Foundation support attached – Dynamic cone penetrometer (DCP) results – if under cutting required, note metreage and DCP results.	☑ ☑	☑ ☑	☑ ☑	☑ ☑	☑ ☑
Record daily level check and confirm on grade	☑	☑	☑	☑	☑
Bedding type and surround material: 40/20 – Pitgravel	☑	☑	☑	☑	☑
Bulk Backfill material: Brown Rock	☑	☑	☑	☑	☑
Bulk backfill compaction (DCP results from pipe to ground level attached)	☑	☑	☑	☑	☑
Alignment – control points identified	☑	☑	☑	☑	☑
Pressure test witnessed and passed by Council representative.	☑	☑	☑	☑	☑

Service connections

All service connections in place, taped, and staked	☑	☑	☑	☑	☑
As-built measurements taken, GPS located	☑	☑	☑	☑	☑
CCTV pipe inspection data and comments supplied	☑	☑	☑	☑	☑

West Construction — **Developer/Contractor**

16/12/20 — **Date**

F5.2 WASTEWATER PIPE LAYING CHECKLIST

Engineering plan number(s): 21879-M-13-501					
Name of certified drainlayer: Zane Millar					
Location: Pipe length (MH To MH)	18.2 to 18.1	18.2 to 19.2	19.2 to 19.1	19.2 to 19.41	18.2 to 20.2

Pipe Laying Checks

Trench Safety (d) Shield (e) Batter (f) Other	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐
Pipe size, quality, manufacturer, on acceptable products list	☑	☑	☑	☑	☑
Set out – Surveyors name Online – Set out checked	☑ ☑	☑ ☑	☑ ☑	☑ ☑	☑ ☑
Foundation support attached – Dynamic cone penetrometer (DCP) results – if under cutting required, note metreage and DCP results.	☑ ☐	☑ ☐	☑ ☑	☑ ☑	☑ ☐
Record daily level check and confirm on grade	☑	☑	☑	☑	☑
Bedding type and surround material: 40/20 – AP Sand	☑	☐	☑	☑	☐
Bulk Backfill material: Brown Rock	☑	☑	☑	☑	☑
Bulk backfill compaction (DCP results from pipe to ground level attached)	☑	☑	☑	☑	☑
Alignment – control points identified	☑	☑	☑	☑	☑
Pressure test witnessed and passed by Council representative.	☑	☑	☑	☑	☑

Service connections

All service connections in place, taped, and staked	☑	☑	☑	☑	☑
As-built measurements taken, GPS located	☑	☑	☑	☐	☑
CCTV pipe inspection data and comments supplied	☑	☑	☑	☑	☑

West Construction — 16/12/20

Developer/Contractor **Date**

F5.2 WASTEWATER PIPE LAYING CHECKLIST

Engineering plan number(s): 21879-M-13-501						
Name of certified drainlayer: Zane Miller						
Location: Pipe length (MH To MH)	20.2 to 20.1	20.2 to 21.3	21.3 to 21.2	21.2 to 21.1	22.2 to 22.1	

Pipe Laying Checks

Trench Safety (d) Shield (e) Batter (f) Other	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐
Pipe size, quality, manufacturer, on acceptable products list	☑	☑	☑	☑	☑
Set out – Surveyors name Online – Set out checked	☑ ☑	☑ ☑	☑ ☑	☑ ☑	☑ ☑
Foundation support attached – Dynamic cone penetrometer (DCP) results – if under cutting required, note metreage and DCP results.	☑ ☑	☑ ☑	☑ ☑	☑ ☑	☑ ☑
Record daily level check and confirm on grade	☑	☑	☑	☑	☑
Bedding type and surround material: 40/20 – PitSand	☑	☑	☑	☑	☑
Bulk Backfill material: Brown Rock	☑	☑	☑	☑	☑
Bulk backfill compaction (DCP results from pipe to ground level attached)	☑	☑	☑	☑	☑
Alignment – control points identified	☑	☑	☑	☑	☑
Pressure test witnessed and passed by Council representative.	☑	☑	☑	☑	☑

Service connections

All service connections in place, taped, and staked	☑	☑	☑	☑	☑
As-built measurements taken, GPS located	☑	☑	☑	☑	☑
CCTV pipe inspection data and comments supplied	☑	☑	☑	☑	☑

WAST Construction — 16/12/20

Developer/Contractor **Date**

F5.3 WASTEWATER MANHOLE CHECKLIST

Engineering Plan Number(s) 21879-M-13-S01					
Name of certified drainlayer: Zane Miller					
Location: Pipe length (MH To MH)	18.5	18.4	18.3	18A1	18.2
Manhole Construction Checklist	**MH number**				
Manhole size, quality, manufacturer on acceptable materials list	☑	☑	☑	☑	☑
Set out /orientation	☑	☑	☑	☑	☑
Sealing strip between risers	☑	☑	☑	☑	☑
Benching					
• Height	☑	☑	☑	☑	☑
• Alignment and cross section	☑	☑	☑	☑	☑
• Half pipe lining (wastewater only)	☑	☑	☑	☑	☑
• Step recesses (if applicable)	☐	☐	☐	☐	☐
Flexible joints	☑	☐	☐	☐	☐
Cutting and plastering of connections	☑	☑	☑	☑	☑
Access details per drawings (e.g. manhole cover sited over steps).	☑	☑	☑	☑	☑
Step irons including epoxy to outside recesses	☑	☑	☑	☑	☑
Bedding type and surround	☑	☑	☑	☑	☑
Bulk backfill compaction - Dynamic Cone Penetrometer (DCP) results attached	☑	☑	☑	☑	☑
No debris in pipelines	☑	☑	☑	☑	☑
Pipe invert fall through manhole	☑	☑	☑	☑	☑
Pressure test witnessed and passed by Council representative.	☑	☑	☑	☑	☑

West Construction — 16/12/20

Developer/Contractor **Date**

F5.3 WASTEWATER MANHOLE CHECKLIST

Engineering Plan Number(s)	21879-M-13-SO1				
Name of certified drainlayer:	Zane Mathieson				
Location: Pipe length (MH To MH)	18.1	19.2	19.1	19A1	20.2
Manhole Construction Checklist	**MH number**				
Manhole size, quality, manufacturer on acceptable materials list	☑	☑	☑	☑	☑
Set out /orientation	☑	☑	☑	☑	☑
Sealing strip between risers	☑	☑	☑	☑	☑
Benching					
• Height	☑	☑	☑	☑	☑
• Alignment and cross section	☑	☑	☑	☑	☑
• Half pipe lining (wastewater only)	☑	☑	☑	☑	☑
• Step recesses (if applicable)	☐	☐	☐	☐	☐
Flexible joints	☑	☑	☑	☑	☑
Cutting and plastering of connections	☑	☑	☑	☑	☑
Access details per drawings (e.g. manhole cover sited over steps).	☑	☑	☑	☑	☑
Step irons including epoxy to outside recesses	☑	☑	☑	☑	☑
Bedding type and surround	☑	☑	☑	☑	☑
Bulk backfill compaction - Dynamic Cone Penetrometer (DCP) results attached	☑	☑	☑	☑	☐
No debris in pipelines	☑	☑	☑	☑	☑
Pipe invert fall through manhole	☑	☑	☑	☑	☑
Pressure test witnessed and passed by Council representative.	☑	☑	☑	☑	☑

WaST Construction — **Developer/Contractor**

16/12/20 — **Date**

F5.3 WASTEWATER MANHOLE CHECKLIST

Engineering Plan Number(s) 21879-M-13-SO1						
Name of certified drainlayer: Zane Milliken						
Location: Pipe length (MH To MH)	20.1	21.3	21.2	21.1	22.2	22.1
Manhole Construction Checklist	**MH number**					
Manhole size, quality, manufacturer on acceptable materials list	☑	☑	☑	☑	☑	✓
Set out /orientation	☑	☑	☑	☑	☑	✓
Sealing strip between risers	☑	☑	☑	☑	☑	✓
Benching						
• Height	☑	☑	☑	☑	☑	✓
• Alignment and cross section	☑	☑	☑	☑	☑	✓
• Half pipe lining (wastewater only)	☑	☑	☑	☑	☑	✓
• Step recesses (if applicable)	☐	☐	☐	☐	☐	
Flexible joints	☑	☑	☑	☑	☑	✓
Cutting and plastering of connections	☑	☑	☑	☑	☑	✓
Access details per drawings (e.g. manhole cover sited over steps).	☑	☑	☑	☑	☑	✓
Step irons including epoxy to outside recesses	☑	☑	☑	☑	☑	✓
Bedding type and surround	☑	☑	☑	☑	☑	✓
Bulk backfill compaction - Dynamic Cone Penetrometer (DCP) results attached	☑	☑	☑	☑	☑	✓
No debris in pipelines	☑	☑	☑	☑	☑	✓
Pipe invert fall through manhole	☑	☑	☑	☑	☑	✓
Pressure test witnessed and passed by Council representative.	☑	☑	☑	☑	☑	✓

WSP Construction — 16/12/20

Developer/Contractor **Date**

F5.4 WASTEWATER TRENCH BACKFILL COMPACTION TEST SUMMARY (ATTACH INDIVIDUAL TEST REPORTS)

Technician Carrying out Tests:	West Construction
Location:	Greenhill Park 13,14,15
Plan No(s):	21872-M-13-Sor
From MH	22.2 - 22.1
Acceptance Criteria:	
Tests by:	West Construction

(attached)

Analysis of Results

☑ Trench backfill completed satisfactorily

or

☐ Trench backfill requires remedial work as follows:

•

West Construction — 16/12/20

Developer/Contractor **Date**

F5.4 WASTEWATER TRENCH BACKFILL COMPACTION TEST SUMMARY (ATTACH INDIVIDUAL TEST REPORTS)

Technician Carrying out Tests:	West Construction
Location:	Greenhill Park 13,14,15
Plan No(s):	21879-M-13-Sq1
From MH	19.2-20.2- 21.3-21.2-21.1-20.1
Acceptance Criteria:	CBR>16
Tests by:	West Construction

(attached)

Analysis of Results

☑ Trench backfill completed satisfactorily

or

☐ Trench backfill requires remedial work as follows:

•

West Construction — 16/12/20

Developer/Contractor **Date**

F5.4 WASTEWATER TRENCH BACKFILL COMPACTION TEST SUMMARY (ATTACH INDIVIDUAL TEST REPORTS)

Technician Carrying out Tests:	West Construction
Location:	Greenhill Park 13,14,15
Plan No(s):	21879-M-13-SOA
From MH	FEI, 18.5, 18.4, 18.3, 18.2, 18.1, 18A1
Acceptance Criteria:	CBR > 16
Tests by:	West Construction

(attached)

Analysis of Results

☑ Trench backfill completed satisfactorily

or

☐ Trench backfill requires remedial work as follows:

•

West Construction — 16/12/20

Developer/Contractor **Date**

F5.4 WASTEWATER TRENCH BACKFILL COMPACTION TEST SUMMARY (ATTACH INDIVIDUAL TEST REPORTS)

Technician Carrying out Tests:	West Construction
Location:	Greenhill 13,14,15
Plan No(s):	21879-M-13-501
From MH	18.2-19.2, 17A1-19.1
Acceptance Criteria:	CBR > 16
Tests by:	West Construction (attached)

Analysis of Results

☑ Trench backfill completed satisfactorily

or

☐ Trench backfill requires remedial work as follows:

•

West Construction — 16/12/20

Developer/Contractor **Date**

F4.6 STORMWATER PIPE NETWORK - FINAL INSPECTION CHECKLIST

Site/Location: Greenhill Park Stages 13, 14, 15	
Developer/Contractor: West Construction	
SUB _____ / _____	**Contract No:**

PRE-MEETING TASKS

Developer to verify checklist prior to meeting:	Developer Check	Council Rep Check
1. All relevant stormwater checklists completed	☑	☐
2. All lines flushed out	☑	☐
3. All required CCTV inspections carried out, reviewed and any re-work completed.	☑	☐
4. All manholes checked (eg.infiltration, plastering)	☑	☐
5. All backfilling complete and tidied up	☑	☐
6. Final as-built and operational plans attached for site inspection	☐	☐
SITE MEETING		
1. Inspect all lines	☐	☐
2. Inspect all manholes and catchpits	☐	☐
3. Works on third party land completed to satisfaction of owner	☐	☐
4. Overland flow to and from adjoining properties not affected	☐	☐
5. Remedial work required? ☐ Yes (please list) ☐ No		

West Construction
.....
Developer

Date 9/3/21

.....
Council

Date.....

F5.6 WASTEWATER PIPE NETWORK - FINAL INSPECTION CHECKLIST

Site/Location: Greenhill Park Stages 13, 14, 15		
Developer/Contractor: West Construction		
SUB _____ / _____ **Contract No:**		
Developer to verify checklist prior to meeting:	**Developer Check**	**Council Rep Check**
6. All checklists completed (add form numbers)	☑	☐
7. All lines flushed out	☑	☐
8. All required CCTV inspections carried out, reviewed and any re-work completed.	☑	☐
9. All manholes checked (eg.infiltration, plastering)	☑	☐
10. All backfilling complete and tidied up	☑	☐
11. Pressure test completed and witnessed	☑	☐
12. Final as-built and operational plans attached for site inspection	☐	☐

Site Meeting		
13. Inspect all lines	☐	☐
14. Inspect all manholes and catchpits	☐	☐
15. Inspect SW inlet and outlet structures	☐	☐
16. Secondary flowpaths and detention ponds	☐	☐
17. Works on third party land completed to satisfaction of owner	☐	☐
18. Wastewater pumping station data complete and test results (Form F5.7) attached	☐	☐
19. Overland flow to and from adjoining properties not affected	☐	☐
20. Remedial work required? ☐ Yes (please list) ☐ No		

_____ West Construction 9/3/21

Council **Developer**

HCC WW testing Report

HCC WW testing Report

Complete

Score	0%	Failed items	0	Actions	0

Location	Greenhill area M Stages 13, 14, 15, Chartwell, Hamilton 3281, New Zealand (-37.7490854, 175.2960279)
Conducted on	16th Nov, 2020 11:22 AM NZDT
Test type	Wastewater pressure test MH pressure test -
Pipe type	100mm - SN16 - uPVC 150mm - SN16 - uPVC
MH # tested	WWMH's 19.1, 19a.1, 19.2, 18a.1, 18.1, 18.2, 18.3, 18.4, 18.5, 20.1, 20.2, 21.1, 21.2, 21.3.
MH # to MH #	WWMH's 19a.1 to 19.2 to 19.1, 19.2 to 18.2 to 18.1, 18.2 to 18.3 to 18a.1, 18.2 to 20.2 to 20.1, 20.2 to 21.3 to 21.2 to 21.1, 18.3 to 18.4 to 18.5 to interceptor.
Tested by	
Matt from Wests Construction 16th Nov, 2020 11:52 AM NZDT	
Inspector/Auditor	Lance Parkes

Comments

WWMH's tested - WWMH's 19.1, 19a.1, 19.2, 18a.1, 18.1, 18.2, 18.3, 18.4, 18.5, 20.1, 20.2, 21.1, 21.2, 21.3.
WW main tested - WWMH's 19a.1 to 19.2 to 19.1, 19.2 to 18.2 to 18.1, 18.2 to 18.3 to 18a.1, 18.2 to 20.2 to 20.1, 20.2 to 21.3 to 21.2 to 21.1, 18.3 to 18.4 to 18.5 to interceptor.

Photos

Pass/Fail	Pass

BACKFILL RESULT SHEET

TESTED BY: West Construction

PROJECT NAME : Greenhill Park Stages 13,14,15

Sewer Chainage	C/L Trench(CIV VALUES)		Remarks
FEI WWMH1.9	**1ST LIFT**	**SECOND LIFT**	
10	24	21	BROWN ROCK 1M TESTS
20	26	19	BROWN ROCK 1M TESTS
SSMH18.5			
10	21	17	BROWN ROCK 1M TESTS
20	23	22	BROWN ROCK 1M TESTS
30	27	29	BROWN ROCK 1M TESTS
40	29	24	BROWN ROCK 1M TESTS
50	22	21	BROWN ROCK 1M TESTS
60	24	27	BROWN ROCK 1M TESTS
70	28	20	BROWN ROCK 1M TESTS
80	26	23	BROWN ROCK 1M TESTS
SSMH18.4			
10	27	24	BROWN ROCK 1M TESTS
20	21	25	BROWN ROCK 1M TESTS
30	24	20	BROWN ROCK 1M TESTS
40	21	18	BROWN ROCK 1M TESTS
50	27	24	BROWN ROCK 1M TESTS
60	20	22	BROWN ROCK 1M TESTS
SSMH18.3			
10	22	18	BROWN ROCK 1M TESTS
20	21	22	BROWN ROCK 1M TESTS
30	27	20	BROWN ROCK 1M TESTS
40	25	27	BROWN ROCK 1M TESTS
50	29	23	BROWN ROCK 1M TESTS
60	19	22	BROWN ROCK 1M TESTS
70	21	26	BROWN ROCK 1M TESTS
SSMH18.2			
10	20	24	BROWN ROCK 1M TESTS
20	22	19	BROWN ROCK 1M TESTS
30	24	29	BROWN ROCK 1M TESTS
40	21	26	BROWN ROCK 1M TESTS
50	21		BROWN ROCK 1M TESTS
60	23		BROWN ROCK 1M TESTS
70	25		BROWN ROCK 1M TESTS
80	21		BROWN ROCK 1M TESTS
SSMH18.1			
SSMH18.3			
10	23	21	BROWN ROCK 1M TESTS
20	27	26	BROWN ROCK 1M TESTS
30	21	25	BROWN ROCK 1M TESTS
40	24		BROWN ROCK 1M TESTS
50	29		BROWN ROCK 1M TESTS
60	24		BROWN ROCK 1M TESTS
SSMH18.A1			
SSMH18.2			
10	22	19	BROWN ROCK 1M TESTS
20	24	22	BROWN ROCK 1M TESTS

TESTED BY:	West Construction		
PROJECT NAME :	Greenhill Park Stages 13,14,15		
30	21	24	BROWN ROCK 1M TESTS
40	29	26	BROWN ROCK 1M TESTS
50	24	25	BROWN ROCK 1M TESTS
60	27	30	BROWN ROCK 1M TESTS
SSMH19.2			
10	29	22	BROWN ROCK 1M TESTS
20	24	26	BROWN ROCK 1M TESTS
30	25	23	BROWN ROCK 1M TESTS
40	26	24	BROWN ROCK 1M TESTS
50	24		BROWN ROCK 1M TESTS
60	21		BROWN ROCK 1M TESTS
70	26		BROWN ROCK 1M TESTS
80	28		BROWN ROCK 1M TESTS
90	24		BROWN ROCK 1M TESTS
SSMH19.1			
SSMH19.2			
10	22		BROWN ROCK 1M TESTS
SSMH19.A1			
SSMH18.2			
10	21	26	BROWN ROCK 1M TESTS
20	23	22	BROWN ROCK 1M TESTS
30	24	24	BROWN ROCK 1M TESTS
40	27	36	BROWN ROCK 1M TESTS
50	19	25	BROWN ROCK 1M TESTS
60	21	24	BROWN ROCK 1M TESTS
SSMH20.2			
10	19	23	BROWN ROCK 1M TESTS
20	20	24	BROWN ROCK 1M TESTS
30	24	21	BROWN ROCK 1M TESTS
40	26	22	BROWN ROCK 1M TESTS
50	22		BROWN ROCK 1M TESTS
60	23		BROWN ROCK 1M TESTS
70	20		BROWN ROCK 1M TESTS
80	21		BROWN ROCK 1M TESTS
SSMH20.1			
SSMH20.2			
10	25	19	BROWN ROCK 1M TESTS
20	24	18	BROWN ROCK 1M TESTS
30	23	26	BROWN ROCK 1M TESTS
40	26	21	BROWN ROCK 1M TESTS
SSMH21.3			
10	20	25	BROWN ROCK 1M TESTS
20	24	23	BROWN ROCK 1M TESTS
SSMH21.2			
10	24	21	BROWN ROCK 1M TESTS
20	25	23	BROWN ROCK 1M TESTS
30	28	25	BROWN ROCK 1M TESTS
40	23	22	BROWN ROCK 1M TESTS
50	29		BROWN ROCK 1M TESTS
60	21		BROWN ROCK 1M TESTS

TESTED BY:	West Construction
PROJECT NAME :	Greenhill Park Stages 13,14,15

70	25		BROWN ROCK 1M TESTS
SSMH21.1			

Barry Pearson

From: Barry Pearson (Shrimpton and Lipinski Limited Partnership (HQ - Tauranga)) <bpearson@sltga.co.nz>
Sent: Tuesday, 13 April 2021 3:24 PM
To: Martyn Smith (Hamilton City Council (Hamilton))
Subject: Document Issue No. 9 - Stage 15 GHP - CCTV SW and WW
Attachments: 19-30378-03 - Greenhill Park - Area M Stage 13, 14 and 15 - Issue 9.pdf

19-30378-03 - Greenhill Park - Area M Stage 13, 14 and 15 Issue 9

Issued by: Barry Pearson (Shrimpton and Lipinski Limited Partnership)
On: 13 Apr 2021

Stage 15 GHP - CCTV SW and WW for Review

Note that we intend to submit our Greenhill Park engineering works completion report to HCC approx. 14th April 2021 for review and approval.

Thanks

Access the documents for this issue

Recipients:

Martyn Smith (Hamilton City Council (Hamilton))
Lance Parkes (Hamilton City Council (Hamilton))
Murray Giles (Hamilton City Council (Hamilton))
Barry Pearson (Shrimpton and Lipinski Limited Partnership (HQ - Tauranga))
Mark Derksen (Shrimpton and Lipinski Limited Partnership (HQ - Tauranga))

BARRY PEARSON

S&L
Land Development and Design Specialists

36 Kereiti Street, Tauranga 3110
PO Box 231, Tauranga 3140
07 577 6069 bpearson@sltga.co.nz
www.sltga.co.nz

APPENDIX 5

Stormwater Construction and QA Records

- Stormwater Pipe Laying Checklist F4.11 F5.2
- Stormwater Manhole Checklist F4.12 F5.3
- Trench Backfill Compaction Test Summary F4.13
- Stormwater Backfill Compaction Test Results
- Stormwater Catchpit Checklist F4.14
- Stormwater Final Inspection Checklist F4.6
- CCTV submission email

F4.2 STORMWATER PIPE LAYING CHECKLIST

Engineering plan number(s):									
Name of certified drainlayer:	Swan 15								
Location: Pipe length (MH To MH)		to 19.5	19.5	to 19.4	19.4	to 19.1	19.1	to 20.1	19.1	to 21.2

Pipe Laying Checks

Trench Safety (a) Shield (b) Batter (c) Other	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐
Pipe size, quality, manufacturer, on acceptable products list	☑	☑	☑	☑	☑
Set out – Surveyors name Online – Set out checked	☑ ☑	☑ ☑	☑ ☑	☐ ☐	☐ ☐
Foundation support attached – Dynamic cone penetrometer (DCP) results – if under cutting required, note metreage and DCP results.	☑ ☑	☑ ☐	☑ ☐	☑ ☐	☑ ☐
Record daily level check and confirm on grade	☑	☑	☑	☑	☑
Bedding type and surround material: 40/20 – Sand	☑	☑	☑	☑	☑
Bulk Backfill material: Brown Rock	☐	☐	☐	☐	☐
Bulk backfill compaction (DCP results from pipe to ground level attached)	☑	☑	☐	☐	☐
Alignment – control points identified	☑	☑	☑	☑	☑
Pressure test witnessed and passed by Council representative.	☐	☐	☐	☐	☐

Service connections

All service connections in place, taped, and staked	☑	☑	☑	☑	☑
As-built measurements taken, GPS located	☑	☑	☑	☑	☑
CCTV pipe inspection data and comments supplied	☑	☑	☑	☑	☑

West Construction — 14/12/20

Developer/Contractor **Date**

F4.2 STORMWATER PIPE LAYING CHECKLIST

Engineering plan number(s):					
Name of certified drainlayer:					
Location: Pipe length (MH To MH)	21.2 to 21.1	15.2 to 15.1	19.4 to 22.2	22.2 to 22.1	to

Pipe Laying Checks

Trench Safety (a) Shield (b) Batter (c) Other	☑ ☑ ☐	☑ ☑ ☐	☑ ☑ ☐	☑ ☐ ☐	☐ ☐ ☐
Pipe size, quality, manufacturer, on acceptable products list	☑	☑	☑	☑	☐
Set out – Surveyors name Online – Set out checked	☑ ☑	☑ ☐	☑ ☑	☑ ☑	☐ ☐
Foundation support attached – Dynamic cone penetrometer (DCP) results – if under cutting required, note metreage and DCP results.	☑ ☑	☑ ☐	☑ ☐	☑ ☐	☐ ☐
Record daily level check and confirm on grade	☑	☑	☑	☑	☐
Bedding type and surround material: 40/20 – Sand	☑	☑	☑	☑	☐
Bulk Backfill material: Brown Rock	☑	☐	☐	☑	☐
Bulk backfill compaction (DCP results from pipe to ground level attached)	☑	☑	☑	☑	☐
Alignment – control points identified	☑	☑	☑	☑	☐
Pressure test witnessed and passed by Council representative.	☐	☐	☐	☐	☐

Service connections

All service connections in place, taped, and staked	☑	☑	☑	☑	☐
As-built measurements taken, GPS located	☑	☑	☑	☑	☐
CCTV pipe inspection data and comments supplied	☑	☑	☑	☑	☐

West Construction — 14/12/20

Developer/Contractor **Date**

F4.3 STORMWATER MANHOLE CHECKLIST

Engineering Plan Number(s)					
Name of certified drainlayer:					
Location: Pipe length (MH To MH)	Outlet 15	19.5	19.4	19.1	20.1
Manhole Construction Checklist	**MH number**				
Manhole size, quality, manufacturer on acceptable materials list	☑	☑	☑	☑	☑
Set out /orientation	☑	☑	☑	☑	☑
Sealing strip between risers	☑	☑	☑	☑	☑
Benching – Height – alignment and cross section – half pipe lining (wastewater only) – Step recesses (if applicable)	☑☑☑☑	☑☑☑☑	☑☑☑☑	☑☑☑☑	☑☑☑☑
Flexible joints	☑	☑	☑	☑	☑
Cutting and plastering of connections	☑	☑	☑	☑	☑
Access details per drawings (e.g. manhole cover sited over steps).	☑	☑	☑	☑	☑
Step irons including epoxy to outside recesses	☑	☑	☑	☑	☑
Bedding type and surround	☑	☑	☑	☑	☑
Bulk backfill compaction - Dynamic Cone Penetrometer (DCP) results attached	☑	☑	☑	☑	☑
No debris in pipelines	☑	☑	☑	☑	☑
Pipe invert fall through manhole	☑	☑	☑	☑	☑

West Construction — **Developer/Contractor**

14/12/20. — **Date**

F4.3 STORMWATER MANHOLE CHECKLIST

Engineering Plan Number(s)					
Name of certified drainlayer:					
Location: Pipe length (MH To MH)	15.1	21.2	21.1	22.2	22.1
	MH number				
Manhole Construction Checklist					
Manhole size, quality, manufacturer on acceptable materials list	☑	☑	☑	☑	☑
Set out /orientation	☑	☑	☑	☑	☐
Sealing strip between risers	☑	☑	☐	☑	☑
Benching – Height – alignment and cross section – half pipe lining (wastewater only) – Step recesses (if applicable)	☑☑☐☐	☑☑☐☐	☑☐☐☐	☑☑☐☐	☑☑☐☐
Flexible joints	☑	☑	☑	☑	☑
Cutting and plastering of connections	☑	☑	☑	☑	☑
Access details per drawings (e.g. manhole cover sited over steps).	☑	☑	☑	☑	☑
Step irons including epoxy to outside recesses	☑	☑	☑	☑	☑
Bedding type and surround	☑	☑	☑	☑	☑
Bulk backfill compaction - Dynamic Cone Penetrometer (DCP) results attached	☑	☑	☑	☑	☑
No debris in pipelines	☑	☑	☑	☑	☑
Pipe invert fall through manhole	☑	☑	☑	☑	☐

Watt Construction — 14/12/20

Developer/Contractor **Date**

F4.4 STORMWATER TRENCH BACKFILL COMPACTION TEST SUMMARY

(attach individual test reports)

Technician Carrying out Tests
West Construction

Location: Greenhill Park Stage 13, 14, 15

Plan No(s): 21879-M-13-501

From MH 19.4 – 22.2 – 22.1 to MH

Acceptance Criteria: CBR > 16

Tests by: West Construction (attached)

Analysis of Results

☑ Trench backfill completed satisfactorily or ☐ Trench backfill requires remedial work as follows:

West Construction

Developer/Contractor **Date** 14/12/20

F4.4 STORMWATER TRENCH BACKFILL COMPACTION TEST SUMMARY

(attach individual test reports)

Technician Carrying out Tests
West Construction

Location: Greenhill Park Stage 13-14-15

Plan No(s): 21879-M-13-501

From MH 15.2-15.1 to MH

Acceptance Criteria: CBR > 15

Tests by: West Construction (attached)

Analysis of Results

☑ Trench backfill completed satisfactorily or ☐ Trench backfill requires remedial work as follows:

West Construction

Developer/Contractor **Date** 14/12/20

F4.4 STORMWATER TRENCH BACKFILL COMPACTION TEST SUMMARY

(attach individual test reports)

Technician Carrying out Tests
West Construction 2011

Location: Greenhill Park Stage 13, 14, 15

Plan No(s): 21879 - M - 13 - 501

From MH 19.1-21.2-21.1 to MH

Acceptance Criteria: CBR > 16

Tests by: West Construction (attached)

Analysis of Results

☑ Trench backfill completed satisfactorily or ☐ Trench backfill requires remedial work as follows:

West Construction

Developer/Contractor **Date** 14/12/20

F4.4 STORMWATER TRENCH BACKFILL COMPACTION TEST SUMMARY

(attach individual test reports)

Technician Carrying out Tests

West Construction 2011

Location: Greenhill Park Stage 13, 14, 15

Plan No(s): 21877-M-13-S01

From MH 19.4–19.1–20.1 to MH

Acceptance Criteria: CBR > 16

Tests by: West Construction (attached)

Analysis of Results

☑ Trench backfill completed satisfactorily or ☐ Trench backfill requires remedial work as follows:

West Construction

Developer/Contractor **Date** 14/12/20

F4.5 STORMWATER CATCHPIT CHECKLIST

Location:	117	118	119	114	115
	Catchpit Number				

Catchpit Construction Checklist

Catchpit , type, size, quality, accepted material checked	☑	☑	☑	☑	☐
Set out /orientation	☑	☑	☑	☐	☐
Location checked	☑	☑	☑	☐	☑
Depth of sump below outlet correct	☑	☑	☑	☑	☑
Cutting and plastering of outlet connection	☑	☑	☑	☑	☑
Floating debris baffle installed correctly	☑	☑	☑	☑	☑
Backfill compaction around pit checked	☑	☑	☑	☑	☑
Seating and plastering of surround and grate to sump barrel	☑	☑	☑	☑	☑
All silt and debris removed from sump	☑	☑	☑	☑	☑

West Construction — 14/12/20

Developer/Contractor **Date**

F4.5 STORMWATER CATCHPIT CHECKLIST

Location:	107	108	087	101	109
			Catchpit Number		

Catchpit Construction Checklist

Catchpit , type, size, quality, accepted material checked	☑	☑	☑	☑	☑
Set out /orientation	☑	☑	☑	☑	☑
Location checked	☑	☑	☑	☑	☑
Depth of sump below outlet correct	☑	☑	☑	☑	☑
Cutting and plastering of outlet connection	☑	☑	☑	☑	☑
Floating debris baffle installed correctly	☑	☑	☑	☑	☑
Backfill compaction around pit checked	☑	☑	☑	☑	☑
Seating and plastering of surround and grate to sump barrel	☑	☑	☑	☑	☑
All silt and debris removed from sump	☑	☑	☑	☑	☑

West Construction — 14/12/20

Developer/Contractor **Date**

F4.5 STORMWATER CATCHPIT CHECKLIST

Location:	116	112	113	111	110
			Catchpit Number		

Catchpit Construction Checklist

Catchpit , type, size, quality, accepted material checked	☑	☑	☑	☑	☑
Set out /orientation	☑	☑	☑	☑	☑
Location checked	☑	☑	☑	☑	☑
Depth of sump below outlet correct	☑	☑	☑	☑	☑
Cutting and plastering of outlet connection	☑	☐	☑	☑	☑
Floating debris baffle installed correctly	☑	☑	☑	☑	☐
Backfill compaction around pit checked	☑	☑	☑	☑	☑
Seating and plastering of surround and grate to sump barrel	☑	☑	☑	☐	☑
All silt and debris removed from sump	☑	☑	☑	☑	☑

West Construction — **Developer/Contractor**

14/12/20 — **Date**

F4.6 STORMWATER PIPE NETWORK - FINAL INSPECTION CHECKLIST

Site/Location: Greenhill Park Stages 13, 14, 15	
Developer/Contractor: West Construction	
SUB _____ / _____	**Contract No:**

PRE-MEETING TASKS

Developer to verify checklist prior to meeting:	Developer Check	Council Rep Check
1. All relevant stormwater checklists completed	☑	☐
2. All lines flushed out	☑	☐
3. All required CCTV inspections carried out, reviewed and any re-work completed.	☑	☐
4. All manholes checked (eg.infiltration, plastering)	☑	☐
5. All backfilling complete and tidied up	☑	☐
6. Final as-built and operational plans attached for site inspection	☐	☐
SITE MEETING		
1. Inspect all lines	☐	☐
2. Inspect all manholes and catchpits	☐	☐
3. Works on third party land completed to satisfaction of owner	☐	☐
4. Overland flow to and from adjoining properties not affected	☐	☐
5. Remedial work required? ☐ Yes (please list) ☐ No		

West Construction
.....
Developer

Date 9/3/21

.....
Council

Date.....

F5.6 WASTEWATER PIPE NETWORK - FINAL INSPECTION CHECKLIST

Site/Location: Greenhill Park Stages 13, 14, 15		
Developer/Contractor: West Construction		
SUB _____ / _____ **Contract No:**		
Developer to verify checklist prior to meeting:	**Developer Check**	**Council Rep Check**
6. All checklists completed (add form numbers)	☑	☐
7. All lines flushed out	☑	☐
8. All required CCTV inspections carried out, reviewed and any re-work completed.	☑	☐
9. All manholes checked (eg.infiltration, plastering)	☑	☐
10. All backfilling complete and tidied up	☑	☐
11. Pressure test completed and witnessed	☑	☐
12. Final as-built and operational plans attached for site inspection	☐	☐

Site Meeting		
13. Inspect all lines	☐	☐
14. Inspect all manholes and catchpits	☐	☐
15. Inspect SW inlet and outlet structures	☐	☐
16. Secondary flowpaths and detention ponds	☐	☐
17. Works on third party land completed to satisfaction of owner	☐	☐
18. Wastewater pumping station data complete and test results (Form F5.7) attached	☐	☐
19. Overland flow to and from adjoining properties not affected	☐	☐
20. Remedial work required? ☐ Yes (please list) ☐ No		

_____ West Construction 9/3/21

Council **Developer**

BACKFILL RESULT SHEET

TESTED BY: West Construction

PROJECT NAME : Greenhill Park Stages 13,14,15

Chainage	C/L Trench(CIV VALUES)	Remarks
SWMH 19.5	**1ST LIFT**	
10	NA	BERM
20	NA	BERM
30	21	BROWN ROCK 1M TESTS
40	23	BROWN ROCK 1M TESTS
SWMH 19.4		
10	19	BROWN ROCK 1M TESTS
20	23	BROWN ROCK 1M TESTS
30	21	BROWN ROCK 1M TESTS
40	25	BROWN ROCK 1M TESTS
50	26	BROWN ROCK 1M TESTS
60	24	BROWN ROCK 1M TESTS
70	21	BROWN ROCK 1M TESTS
SWMH 22.2		
10	25	BROWN ROCK 1M TESTS
20	26	BROWN ROCK 1M TESTS
30	24	BROWN ROCK 1M TESTS
40	17	BROWN ROCK 1M TESTS
50	24	BROWN ROCK 1M TESTS
SWMH 22.1		
SWMH 19.4		
10	19	BROWN ROCK 1M TESTS
20	20	BROWN ROCK 1M TESTS
30	23	BROWN ROCK 1M TESTS
40	24	BROWN ROCK 1M TESTS
50	29	BROWN ROCK 1M TESTS
60	27	BROWN ROCK 1M TESTS
70	23	BROWN ROCK 1M TESTS
SWMH 19.1		
10	24	BROWN ROCK 1M TESTS
20	29	BROWN ROCK 1M TESTS
30	27	BROWN ROCK 1M TESTS
40	23	BROWN ROCK 1M TESTS
50	24	BROWN ROCK 1M TESTS
60	28	BROWN ROCK 1M TESTS
70	21	BROWN ROCK 1M TESTS
SWMH 21.2		
10	30	BROWN ROCK 1M TESTS
20	25	BROWN ROCK 1M TESTS
30	26	BROWN ROCK 1M TESTS
40	22	BROWN ROCK 1M TESTS
SWMH 21.1		
SWMH 19.1		
10	27	BROWN ROCK 1M TESTS
20	29	BROWN ROCK 1M TESTS
30	19	BROWN ROCK 1M TESTS
40	24	BROWN ROCK 1M TESTS
50	23	BROWN ROCK 1M TESTS
60	24	BROWN ROCK 1M TESTS
70	22	BROWN ROCK 1M TESTS
80	24	BROWN ROCK 1M TESTS
SWMH20.1		
SWMH15.2EX		
20	21	BROWN ROCK 1M TESTS
30	23	BROWN ROCK 1M TESTS
40	24	BROWN ROCK 1M TESTS
50	21	BROWN ROCK 1M TESTS
SWMH15.1		

Barry Pearson

From: Barry Pearson (Shrimpton and Lipinski Limited Partnership (HQ - Tauranga)) <bpearson@sltga.co.nz>
Sent: Tuesday, 13 April 2021 3:24 PM
To: Martyn Smith (Hamilton City Council (Hamilton))
Subject: Document Issue No. 9 - Stage 15 GHP - CCTV SW and WW
Attachments: 19-30378-03 - Greenhill Park - Area M Stage 13, 14 and 15 - Issue 9.pdf

19-30378-03 - Greenhill Park - Area M Stage 13, 14 and 15 Issue 9

Issued by: Barry Pearson (Shrimpton and Lipinski Limited Partnership)
On: 13 Apr 2021

Stage 15 GHP - CCTV SW and WW for Review

Note that we intend to submit our Greenhill Park engineering works completion report to HCC approx. 14th April 2021 for review and approval.

Thanks

Access the documents for this issue

Recipients:

Martyn Smith (Hamilton City Council (Hamilton))
Lance Parkes (Hamilton City Council (Hamilton))
Murray Giles (Hamilton City Council (Hamilton))
Barry Pearson (Shrimpton and Lipinski Limited Partnership (HQ - Tauranga))
Mark Derksen (Shrimpton and Lipinski Limited Partnership (HQ - Tauranga))

BARRY PEARSON

S&L
Land Development and Design Specialists

36 Kereiti Street, Tauranga 3110
PO Box 231, Tauranga 3140
07 577 6069 bpearson@sltga.co.nz
www.sltga.co.nz

APPENDIX 6

Landscaping Certifications

- Landscaping final inspection form requested from HCC

APPENDIX 7

Network Utilities Certifications

- Ultrafast Fibre Completion Letter
- First Gas Completion Letter
- Street Light Product Warranty
- WEL Completion Letter
- Street light Suppliers Declaration of Conformity
- Streetlight Producer Statement
- Streetlight COC & ROI Certificates
- HCC Form Street Light RAMM Data

Ref: S&L Consultants, Surveyors & Engineers – 20413-S15
ID: HN-086-18

0800 342 735
info@ultrafast.co.nz
ultrafastfibre.co.nz

27th of March 2021

ACCEPTANCE BY ULTRAFAST FIBRE LIMITED AS TELECOMMUNICATIONS OPERATOR

Subdivision: Greenhill Park Ruakura Residential Stage 15 (27 Lots), Lot 702, DP 534481, Chartwell, Hamilton.

1. Ultrafast Fibre Limited (UFF) confirms that UFF will be the telecommunications operator of the telecommunications reticulation in the proposed public roads for the Ruakura Residential Stage 15 [Greenhill Park] Hamilton, Subdivision by Chedworth Properties Ltd. (the "**Subdivision**") Lot 702, DP 534481, to provide network connections to Lot 407 through to Lot 433, in the Subdivision (the "**Reticulation**").

2. The Reticulation is now installed in accordance with:

   (a) the requirements and standards set by the Hamilton City Council and advised to UFF via the Council's website; and

   (b) the requirements of the Telecommunications Act 2001 and all other applicable laws, regulations and codes (as amended).

3. The Reticulation has been installed by Broadspectrum Limited to UFF's satisfaction, for the specific subdivision lots detailed on the "final" Scheme Plan as attached, with UFF remaining the owner, operator and maintainer of the Reticulation.
4. The attached "final" Scheme Plan must match your submission to the Hamilton City Council and must have the UFF stamp of 'Approval' accompanied by sign-off. Any additional lots created after initial deployment of multi-duct/fibre infrastructure will be chargeable.
5. One or more retail service providers will be available to supply telecommunications services over the completed Reticulation when service is available, provided that UFF shall not be responsible if the retail service provider's offer to supply such telecommunications services or the number of such providers varies from time to time.

SIGNED for and on behalf of
ULTRAFAST FIBRE LIMITED by:

Signature:

Name: Russell Gibson

Date: 27th of March 2021

EXTENT OF WORKS

WEBB DRIVE

SWALE 3B

SWALE 3A

SWALE 1D

EXTENTS OF CONSTRUCTION

BOARDWALK TO BE DESIGNED BY OTHERS

TEMPORARY INTERSECTION TO PROVIDE ACCESS TO AREA I

www.beca.com

UFF-Approved¶
Subdivision-Scheme-Plan¶
Approver: → Russell-Gibson-¶
Date:-→ → 27/02/2021¶
Signature:- ¶

LEGEND:

- AREA M EXTENTS
- STORMWATER CULVERT
- BASIN LOW FLOW CHANNEL
- AREA M - STAGE 9
- AREA M - STAGE 10
- AREA M - STAGE 11
- AREA M - STAGE 12
- AREA M - STAGE 13 — 18 lots
- AREA M - STAGE 14 — 33 lots
- AREA M - STAGE 15 — 27 lots

NOTES:

1. EXTENT OF WORKS IS DEFINED AS THE "AREA M EXTENTS" AS SHOWN ON THE PLANS.
2. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH HAMILTON CITY COUNCIL INFRASTRUCTURE TECHNICAL SPECIFICATIONS (UNLESS OTHERWISE SPECIFIED).
3. DETAILS OF INTERFACING WITH OTHER PROJECT STAGES TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION

ORIGINAL DRAWING IN COLOUR

FOR CONSTRUCTION

1	FOR CONSTRUCTION	SM	PP	AJ	21.05.18

Beca

Chedworth Properties Limited

GREENHILL

AREA M

ROADING AND EARTHWORKS GENERAL ARRANGEMENT

CIVIL ENGINEERING

3411915-CA-2010

1

Completion Certificate

To:	Chedworth Properties Limited
From:	Paul Bird
Cc:	Barry Pearson
Date:	7 April 2021

SUBJECT: Greenhill Park Subdivision – Stage 15

(First Gas Distribution Network)

MESSAGE:

This Completion Certificate confirms that the First Gas Distribution Network installed at the above-mentioned development, has been laid, tested and commissioned in accordance with First Gas Technical Standards and relevant Gas Regulations.

Regards

Paul Bird
Distribution Accounts Manager - New Developments
Firstgas
First Gas | Level 6, Resimac House| 45 Johnston St | Wellington | 6011
DDI 04 979 5367 | **M** 027 531 0060 | firstgas.co.nz

DESIGN CERTIFICATE

INFRASTRUCTURE/ LAND DEVELOPMENT

ISSUED BY: Merritt C Strickett.

TO: Chedworth Properties Ltd

TO BE SUPPLIED TO: Hamilton City Council

IN RESPECT OF: Greenhill Park Stage 15, Hamilton

AT: Carrs Road, Hamilton

Merritt C Strickett has been engaged by Chedworth Properties Ltd

To provide Street Lighting Design to AS/NZS1158 Standard and to Hamilton City Councils Code of Practice and RITS code of practice.

in respect of the infrastructure/land development described above.

Drawing references - REF 7141

I **Merritt C Strickett** have the qualifications and experience relevant to this project as set out herein and have designed the subject works and confirm that the design is to current good engineering practice, and that it satisfies all relevant Resource Consent conditions, relevant TA requirements, and applicable codes and standards. My company holds professional indemnity insurance in the sum of $5,000,000.00

Qualifications and experience

NZIHT Workshop, 32 years' experience in Street lighting design.

Efficient Road Lighting Resource Workshop.

ae

Date: 10 November 2020

10 November 2020 Ref: 7141

PRODUCER STATEMENT FOR STREET LIGHTING

Project: Greenhill Park Area M Stage 15

Location: Carrs Road Hamilton

The lighting for this Project has been designed to comply with the New Zealand standard AS/NZS1158.3.1.2020 for PR4 and PR5 using Perfectlite and AGI32 lighting design software and in conjunction with the Hamilton City Council and RITS Code of Practice requirements

Product	The P Category luminaires are Mini Stork 4 LED Optic P, 3000K, and the lighting columns and outreach arms are manufactured from steel which is hot dipped galvanised after fabrication and then coated with a 10 year warranty paint finish
Lifetime	The luminaire have an economic life of 15-20 years where normal maintenance is carried out. The pole and outreach have an economic life of 40 years.

Yours Faithfully
IBEX INTERNATIONAL LIMITED

MERRITT STRICKETT
Account Manager - Roadway
M +64 21 220 1291 T +64 9 915 1083
merritts@ibexlighting.com
IBEXLIGHTING.COM

IBEX 10 Year Limited Warranty – Project Warranty

Date: 04-03-2021

Project: Greenhill Park, Stage 15 Ref: 7141-00

Issued To: Chedworth Properties Limited

Transfer Provision: Hamilton City Council

a) This limited warranty is provided by Ibex International limited ("Ibex") in relation to the following products;

Luminaire – Vizulo Mini Stork Lens21 (5 year warranty)

Column - 6m Tapered column with 'Milford' Outreach (10yr Warranty Black paint Finish)

b) Ibex warrants to the purchaser that it will deliver the product in new condition in the product's factory packaging. Further, the product will be free of defects in materials and/or workmanship for the warranty period stated.
c) Ibex has sole discretion as to whether any warranty claim shall be valid considering all factors including (without limitation) the operating conditions the product has endured and the overall performance of the product. this warranty is only valid when proof of purchase can be provided and if the product has been operating within New Zealand
d) The warranty period commences from the date of Ibex's invoice or the product's delivery date whichever is the earlier.
e) If Ibex determines that a warranty claim is valid, Ibex will at its sole discretion either refund the purchase price of the product, refund the current market cost of an alternative product, repair the product or replace the product. In case of the repair or replacement the replacement product may not necessary be an identical product but an improved version due to ongoing technological developments and/or supply of original components currently available.
f) Ibex reserve the right to recondition/refurbish any article that is subject to a warranty claim or replace parts with new or used parts in satisfaction of this warranty.

2 - Warranty Exclusions
a) This warranty excludes any costs incurred by the purchaser including (without limitation) equipment hire, labour charges, accommodation charges, transport charges and travel charges.
b) This warranty does not apply to loss or damages to the product caused by one or more of the following:
• Negligence and/or incorrect handling of the product by the buyer, installer, service agent or any other party acting on behalf or for the buyer;
• Improper installation;
• Improper handling;
• the product not being installed or maintained as set out in the installation instruction guide for the product;
• Acts of nature , fire , vandalism;
• Civil disturbances;
• Damages caused by fall or collision
• Installation or operation under environmental conditions beyond the manufacturer's recommendations;
• Power surges;
• Electrical supply fluctuations or faults;
• Mechanical failures as a result of actions not considered by Ibex to be within the normal operating conditions of the product;

Improper service and/or maintenance work carried out by someone not considered by the Ibex as an approved service agent/facilitator; and/or
• any other situation and/or event or circumstance deemed by Ibex as sufficient to render this warranty void.
c) Notwithstanding any other provision of this warranty or any statute or rule of law, to the greatest extent possible Ibex shall have no liability for any costs, damages or other losses directly or indirectly attributable to failure of the product. Further, Ibex shall have no liability for any costs incurred by any party for any maintenance or remedial work.

3 - Product performance

a) Ibex retains the sole discretion to determine whether a product is defective.
b) This warranty shall apply only to the malfunction of products due to defects in material and or workmanship exceeding nominal failure rates. Unless otherwise stipulated in the product and application specifications provided by Ibex, the nominal failure rate for electronic operating devices and components such as LED's shall be set at 0.2% per 1000 operating hours. Furthermore a decrease in luminous flux of up to 0.6% per 1,000 operating hours and colour shift as per the LED Module /chip suppliers technical data information shall be considered normal and is not covered by this warranty.
c) In the event that LED modules/Chips are replaced, lighting properties may vary from the original product.

4 - Warranty Transfers

this warranty may not be transferred to any entity without either the express written consent of Ibex or this being explicitly stated in the cover notes of this document. Ibex may withhold such consent at its sole and absolute discretion.

5 - Warranty Terms and Conditions

a) In the event where a warranty is claimed on a product which is not faulty, Ibex reserves the right to seek compensation from the entity claiming on the warranty for all costs that have been incurred by Ibex including (without limitation) travel, accommodation, costs of access equipment, and third party service agents' costs.
b) The warranty terms are those specified in wiring in this warranty document only.
c) Ibex's warranty is a back-to-base warranty. Ibex shall bear no responsibility of any charges incurred by any entity for transport of the product to Ibex and/or from Ibex to the warranty claimant.
d) Labour and Service charge incurred by Ibex in repairing / refurbishing any product are not covered in this warranty.
e) The warranty shall be void if the product has been tampered with or parts replaced by personnel that have not be previously authorised by Ibex in writing.
Ibex reserves the right to modify this warranty at any time without prior notification and the new warranty terms shall be valid for all orders placed with the Ibex on or after the new issue date, from the date that the new warranty terms are posted on Ibex's website.

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1579 /

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #107

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stark Little Brother LED street luminaire, 2005/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC15792

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #109

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.

(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stark Little Brother LED street luminaire. 20/05/2019

Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.

(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing

Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.

(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached

Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1579 3

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton # 110

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stark Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1579 4

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton # ///

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stork Little Brother LED street luminaire, 20/03/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing.
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004.

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1579 5

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #12

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stork Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing.
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

ELECTRICAL CERTIFICATE OF COMPLIANCE & ELECTRICAL SAFETY CERTIFICATE

REFERENCE/CERTIFICATE ID NO.: NWELCOC15796

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #113

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached: VICLU Stork Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached: Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004.

ELECTRICAL CERTIFICATE OF COMPLIANCE & ELECTRICAL SAFETY CERTIFICATE

REFERENCE/CERTIFICATE ID NO.: NWELCOC1579 ~~714~~

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the specified system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #1/4

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ☒ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VICSLU Stark Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ☒ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1579

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #115

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ☒ New work

The prescribed electrical work is: ☐ Low risk ☐ General ☒ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ☒ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ☒ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ☒ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ☒ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

☒ All ☐ Parts (specify)

The work relies on manufacturers instructions: ☒ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VICLU Stork Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ☒ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing.
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ☒ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ☒ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004.

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1579 9

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton # 116

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stark Little Brother LED street luminaire. 20/03/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing.
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004.

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1579/O

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #117

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify)

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stork Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

ELECTRICAL CERTIFICATE OF COMPLIANCE & ELECTRICAL SAFETY CERTIFICATE

REFERENCE/CERTIFICATE ID NO.: NWELCOC1579 ff

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #/

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify)

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached: VIOLU Stork Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached: Roadway Lighting Plan drawing.
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

ELECTRICAL CERTIFICATE OF COMPLIANCE & ELECTRICAL SAFETY CERTIFICATE

REFERENCE/CERTIFICATE ID NO.: NWELCOC1579 / 2

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #119

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn **Registration/Practising licence number:** E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stork Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name: **Registration/Practising licence number:**

Certifier's signature: **Certificate Issue Date:** **Connection Date:**

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004

ELECTRICAL CERTIFICATE OF COMPLIANCE & ELECTRICAL SAFETY CERTIFICATE

REFERENCE/CERTIFICATE ID NO.: NWELCOC1579 13

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #121

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn **Registration/Practising licence number:** E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stonk Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name: **Registration/Practising licence number:**

Certifier's signature: **Certificate Issue Date:** **Connection Date:**

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(b) of the Building Act 2004

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1579/4

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #122

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 20/02/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Slork Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 20/02/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004.

ELECTRICAL CERTIFICATE OF COMPLIANCE & ELECTRICAL SAFETY CERTIFICATE

Reference/Certificate ID No.: NWELCOC 583,5?

Location Details: Subdivision Area M Stage 9 to 15 Greenhill Park Hamilton #4/13

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email:

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ☒ New work

The prescribed electrical work is: ☐ Low risk ☐ General ☒ High risk (specify)

Means of compliance: ☐ Part 1 of AS/NZS 3000 ☒ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ☒ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken:

Contains fittings that are safe to connect to a power supply? ☒ Yes ☐ No

Specify type of supply system: 230V Main MEN

The installation has an earthing system that is correctly rated (where applicable) ☒ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

☒ All ☐ Parts (specify)

The work relies on manufacturers instructions: ☒ Yes ☐ No

If yes – identify the instructions including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg internet link.)

- Identify:
- Link:

The work has been done in accordance with a certified design: ☒ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg internet link.)

- Identify:
- Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ☒ Yes ☐ No

If yes – identify the SDoC including name, date and version or SDoC registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg internet link.)

- Identify:
- Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ☒ Yes

Description of Work:	Test Results (provide values)	
Install New Street Column with LED Head	Polarity	
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk	(Independent earth) Insulation resistance	200+ M Ohms
Mains Cable. Mains installation by others	Earth Continuity	0.? Ohms
Livened by others.	Bonding	0.? Ohms
	Fault Loop Impedance	Ohms
	Other (specify)	

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] Date: 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No: NWEL2002583-7

Location Details: Subdivision Area M - Stage 8 to 15 Greenhill Park Hamilton # /20

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email:

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ☒ New work

The prescribed electrical work is: ☐ Low risk ☐ General ☒ High risk (specify)

Means of compliance: ☐ Part 1 of AS/NZS 3000 ☒ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ☒ No ☐ Yes (specify)

Date or range of dates that prescribed electrical work undertaken:

Contains fittings that are safe to connect to a power supply? ☒ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ☒ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

☒ All ☐ Parts (specify)

The work relies on manufacturers Instructions: ☒ Yes ☐ No

The work has been done in accordance with a certified design: ☒ Yes ☐ No

The work relies on a Supplier Declaration of Conformity (SDoC): ☒ Yes ☐ No

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ☒ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains installation by others.
Livened by others.

Test Results (provide values)	
Polarity	
Insulation resistance	2001 M Ohms
Earth Continuity	0.1 Ohms
Bonding	0.1 Ohms
Fault loop impedance	Ohms
Other (specify)	

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Cert Ref's signature: Date: 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

ELECTRICAL CERTIFICATE OF COMPLIANCE & ELECTRICAL SAFETY CERTIFICATE

Reference/Certificate ID No.: NWELCOC1683/C

This form has been designed for use by registered electrical workers as required by the Electricity (Safety) Regulations 2010 under Part 1 or Part 2 of AS/NZS 3000 ... should be connected to the specified ...

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton # 1 D 8

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email:

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ☒ New work

The prescribed electrical work is: ☐ Low risk ☐ General ☒ High-risk (specify)

Means of compliance: ☐ Part 1 of AS/NZS 3000 ☒ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ☒ No ☐ Yes (specify)

Date or range of dates that prescribed electrical work undertaken:

Contains fittings that are safe to connect to a power supply? ☒ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ☒ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

☒ All ☐ Parts (specify)

The work relies on manufacturers instructions: ☒ Yes ☐ No

If yes, identify the instructions (including name, date and version). Also attach a copy of manufacturer's instructions to this certificate (Or provide reference to readily accessible electronic format, eg internet link)

Identify ... Link:

The work has been done in accordance with a certified design: ☒ Yes ☐ No

If yes, identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate (Or provide reference to readily accessible electronic format, eg internet link)

Identify ... Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ☒ Yes ☐ No

If yes, identify the SDoC including name, date and version ... Also attach a copy of the SDoC to this certificate (Or provide reference to readily accessible electronic format, eg internet link)

Identify ... Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ☒ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others

Test Results (provide values)		
Polarity (Independent earth)		
Insulation resistance	2000 M	Ohms
Earth Continuity	0.1	Ohms
Bonding	0.1	Ohms
Fault loop impedance		Ohms
Other (specify)		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct

Certifier's signature: [signature] Date: 30/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of inspector:	Gavin Bodey	Registration #:	I250728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 133, stage 9-15

Location Type:
- ☐ Domestic
- ☐ Non-Domestic Accommodation
- ☐ Industrial
- ☐ Commercial
- ☐ Educational
- ☐ Healthcare
- ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yeti Martyn	Registration #:	L257490
			EW121000
CoC details:	Nationwired 19931		☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection. New Main Earthing System.Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C. imp < 5 Ohm
M.E.N. ink.   HRPA #005830023M

High Risk Category:

- ☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i)
- ☐ High voltage installation – 6A(2)(a)(ii)
- ☐ Mains parallel generation – 6A(2)(a)(iii)
- ☐ Other – please describe:
- ☐ Photovoltaic system – 6A(2)(a)(iv)
- ☐ Hazardous area – 6A(2)(a)(v)
- ☐ Animal stunning or meat conditioning – 6A(2)(c)
- ☐ Electrical medical area – 6A(2)(b)(i)
- ☑ Mains work – 6A(2)(d)

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations, and the ~~installation~~ / part installation on which the work has been done is, and will be / not be, when connected, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature]   Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (inspector) details:

Name of Inspector: Gavin Bodey — Registration #: I250728

Email Address: gavin@bodeyspark.co.nz — Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 134 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeti Martyn — Registration #: E257400 EW121000

CoC details: Nationwired 16632 — ☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was Inspected:

New Installation, New Streetlight with M.E.N. board. New Main Neutral bar and circuit protection, New Main Earthing System.Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection

Earthing and bonding visual ok
polarity
M.E.C. imp < 5 Ohm
M.E.N. link. HRPA #0058304115G

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(v)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(vi) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations, and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~ when enlivened, electrically safe.

(Note: Strike out or delete the inappropriate words as highlighted in red above.)

Signature: [signature] — Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector:	Gavan Bodey	Registration #:	I250728
Email Address:	gavin@boddyspark.co.nz	Telephone:	021 428 920

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 135, stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial
☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yeri Martyn	Registration #:	E257490
			EW121000
CoC details:	Nationwired 15833		☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection. New Main Earthing System. Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS 3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C. impedance 0.5 Ohm
M.E.N. link. TIRPA #0058306ZCV

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(ii) ☐ Electrical pool or area – 6A(2)(b)(i)
☐ High voltage installation – 6A(2)(b)(ii) ☐ Hazardous area – 6A(2)(c)(v) ☑ Mains work – 6A(2)(h)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in ~~part~~ accordance with the regulations; and the ~~installation~~/part installation on which the work has been done is, and will be/~~was~~ when energised, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greens II

Issuer (Inspector) details:

Name of Inspector: Gavin Bodey — Registration #: I250728

Email Address: gavin@bodeyspark.co.nz — Telephone: 021 428 620

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 130, stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeli Martyn — Registration #: E257490

EW121000

CoC details: Nationwired 15634 — ☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N. board. New Main Neutral bar and circuit protection. New Main Earthing System Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection.

AS/NZS3000 part 2

What are the results of the inspection

Earthing and bonding visual ok

polarity

M.E.C. line < 5 Ohm

M.E.N. link.. HRPA #0058307K6D

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(v)

☐ High voltage installation – 6A(2)(a)(iii) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 6A(2)(b)

☐ Mains parallel generation – 6A(2)(a)(ii) ☐ Animal stunning or meat conditioning – 6A(2)(c)

☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations; and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when connected, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector: Gavin Bodey | Registration #: I250728

Email Address: gavin@bodeyspark.co.nz | Telephone: 021 426 620

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 137, stage 9-15

Location Type:
- [ ] Domestic
- [ ] Non-Domestic Accommodation
- [ ] Industrial
- [ ] Commercial
- [ ] Educational
- [ ] Healthcare
- [x] Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeti Martyn | Registration #: E257490

EW121000

CoC details: Nationwired 15835 | [ ] CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N. board. New Main Neutral bar and circuit protection, New Main Earthing System. Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS 3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok.
polarity
M.E.C. ino < 5 Ohm
M.E.N. link.   HRPA #0059311V2S

High Risk Category:

- [ ] Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i)
- [ ] Photovoltaic system – 6A(2)(a)(iv)
- [ ] Electrical medical area – 6A(2)(a)(vi)
- [ ] High voltage installation – 6A(2)(a)(ii)
- [ ] Hazardous area – 6A(2)(a)(v)
- [x] Mains work – 6A(2)(b)
- [ ] Mains parallel generation – 6A(2)(a)(iii)
- [ ] Animal stunning or meat conditioning – 6A(2)(c)
- [ ] Other – please describe:

Declaration

I hereby confirm that the work described above has been done in ~~/ not in~~ accordance with the regulations and the ~~installation~~ / part installation on which the work has been done is, and will be ~~/ not be~~, when enlivened, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] | Date: 10/03/21

NB1ROC 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector	Gavin Bodey	Registration #:	I250728
Email Address:	gavin@bodeyspark.co.nz	Telephone	021 423 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 138, stage 9-16

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yeli Martyn	Registration #:	E257490 EW121000
CoC details:	Nationwired 15835		☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected

New installation New Streetlight with M.E.N. board. New Main Neutral bar and circuit protection. New Main Earthing System. Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection

AS/NZS 3000 part 2

What are the results of the inspection

Earthing and Bonding visual ok
polarity
M.E.C. imp < 5 Ohm
M.E.N. link HRPA #0058370M2O

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(v)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iv) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~part in~~ accordance with the regulations, and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~ when enlivened, electrically safe.

(Note: Strike out or delete the inappropriate words highlighted in red above.)

Signature [signature] Date: 10/03/21

AUD-F-12 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details

Name of Inspector	Gavin Boddy	Registration #:	I250728
Email Address:	gavin@boddyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 139, stage 9-16

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s)	Yeti Martyn	Registration #:	E257490 EW121000
CoC details:	Nationwired 15837		☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New installation. New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection. New Main Earthing System Bonding of Pole and cabinet door

Specify the regulation(s) and comparison standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C. imp < 5 Ohm
M.E.N. link . ICP: #0058315572X

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(v)
☐ Photovoltaic system – 6A(2)(a)(iv)
☐ Electrical medical area – 6A(2)(b)(vi)
☐ High voltage installation – 6A(2)(a)(ii)
☐ Hazardous area – 6A(2)(a)(i)
☑ Mains work – 6A(2)(a)
☐ Mains parallel generation – 6A(2)(a)(iii)
☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations; and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when enlivened, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature [signature] Date: 10/03/21

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1583 /

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton # 133

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 09/03/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stark Labs Brother LED street luminaire. 03/03/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004.

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1583 2

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton # 134

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 09/03/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stark Little Brother LED street luminaire. 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: **Date:** 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1583 3

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #135

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 09/03/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stark Little Brother LED street luminaire. 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes – identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC158354

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #136

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 09/03/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stonk Little Brother LED street luminaire, 20/03/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing.
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004.

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1583 5

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton #137

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 09/03/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Stark Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing.
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (Independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004.

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1583 6

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the **specified** system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton # 138

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 09/03/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VICLU Slim Line Outline LED street Luminaire. 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004.

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC1583 7

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under **Part 1 or Part 2 of AS/NZS 3000** are safe to be connected to the specified system of electrical supply.

Location Details: Subdivision Area M - Stage 9 to 15 Greenhill Park Hamilton # 139

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: yetimartyn@hotmail.com

Name and registration number of person(s) supervised:

Certificate of Compliance

Type of work: ☐ Addition ☐ Alteration ■ New work

The prescribed electrical work is: ☐ Low risk ☐ General ■ High-risk (Specify):

Means of compliance: ☐ Part 1 of AS/NZS 3000 ■ Part 2 of AS/NZS 3000

Additional Standards or electrical code of practice were required: ■ No ☐ Yes (specify):

Date or range of dates that prescribed electrical work undertaken: 09/03/2021

Contains fittings that are safe to connect to a power supply? ■ Yes ☐ No

Specify type of supply system: 230V Mains MEN

The installation has an earthing system that is correctly rated (where applicable) ■ Yes ☐ No

Parts of the installation to which this certificate relates that are safe to connect to a power supply?

■ All ☐ Parts (specify)

The work relies on manufacturers instructions: ■ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Manufacturer's instructions attached. VIOLU Slick Little Brother LED street luminaire, 20/05/2019
Link:

The work has been done in accordance with a certified design: ■ Yes ☐ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: Certified design attached. Roadway Lighting Plan drawing
Link:

The work relies on a Supplier Declaration of Conformity (SDoC): ■ Yes ☐ No

If yes - identify the SDoC including name, date and version OR EESS registration. Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify: SDoC attached
Link:

The installation has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010 ☐ No ■ Yes

Description of Work:

Install New Street Column with LED Head
Install MEN Board, Main Earth and Earth Stake, Cad Welded Connection - Light Risk
Mains Cable, Mains Installation by others.
Livened by others.

Test Results (provide values)		
Polarity (independent earth):		
Insulation resistance:	200+ M	Ohms
Earth Continuity:	0.1	Ohms
Bonding:	0.1	Ohms
Fault Loop Impedance		Ohms
Other (specify):		

By signing this document I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct.

Certifier's signature: [signature] **Date:** 09/03/2021

Electrical Safety Certificate

By signing this document I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name:

Registration/Practising licence number:

Certifier's signature:

Certificate Issue Date:

Connection Date:

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This Electrical Safety Certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(a) of the Building Act 2004

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector:	Gavin Bodey	Registration #:	I250728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M. Streetlight 109stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yed Marlyn	Registration #:	E257490 EW121000
CoC details:	Nationwired 15792 Streetlight 109		☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N board, New Main Neutral bar and circuit protection, New Main Earthing System.Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C imp <5 Ohm
M.E.N link. ~RPA #00583674L

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(vi)
☐ High voltage installation – 6A(2)(a)(v) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~partly in~~ accordance with the regulations, and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when connected, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

ROI 1.0 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details

Name of Inspector:	Gavin Bodey	Registration #:	1250728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 110stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Heathcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yeti Martyn	Registration #:	E257490
			EW121060
CoC details:	Nationwired 157923 Streetlight 110	☐ CoC(s) attached	

Certifying Electrical Work and CoC details:

What was inspected:

New installation , New Streetlight with M.E.N board, New Main Neutral bar and circuit protection, New Main Earthing System Bonding of Pole and control door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS 3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok.
polarity
M.E.C imp < 5 Ohm
M.E.N link HRPA V0058367KAL

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(vi)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in ~~part~~ accordance with the regulations; and the ~~installation~~ part installation on which the work has been done is, and will be ~~part~~, when energised, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] Date: 10/03/21

M3161.02 01/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector: Gavin Bodey | Registration #: I250728

Email Address: gavin@bodeyspark.co.nz | Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 111 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeli Martyn | Registration #: E257490, EW121000

CoC details: Nationwired 16794 Streetlight 111

☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected

New installation, New Streetlight with M E N board, New Main Neutral bar and circuit protection. New Main Earthing System Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection.

Earthing and bonding visual ok
polarity
M E C. line < 5 Ohm
M E N. link HRPA #0058572015

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i)
☐ Photovoltaic system – 6A(2)(a)(iv)
☐ Electrical medical area – 6A(2)(a)(vi)
☐ High voltage installation – 6A(2)(a)(ii)
☐ Hazardous area – 6A(2)(a)(v)
☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii)
☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations, and that the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~ when enlivened, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] | Date: 10/03/21

MBIE 132 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector: Gavin Bodey | Registration #: I250728

Email Address: gavin@bodeyspark.co.nz | Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 112 stage 9-15

Location type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeti Martyn | Registration #: L257490, EW121000

CoC details: Nationwired 15796 Streetlight 112 | ☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection, New Main Earthing System Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS 3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C. imp < 0 Ohm
M.E.N. link. ERPA #00563/3010

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i)
☐ High voltage installation – 6A(2)(a)(x)
☐ Mains parallel generation – 6A(2)(a)(iii)
☐ Other – please describe
☐ Photovoltaic system – 6A(2)(a)(iv)
☐ Hazardous area – 6A(2)(a)(v)
☐ Animal stunning or meat conditioning – 6A(2)(a)
☐ Electro-medical area – 6A(2)(a)(vi)
☑ Mains work – 6A(2)(b)

Declaration

I hereby confirm that the work described above has been done in / ~~under~~ accordance with the regulations; and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~will be~~, when enlivened, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] | Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector: Gavin Bodey | Registration #: I250728

Email Address: gavin@bodeyspark.co.nz | Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 113 stage 9-15

Location type:
- [ ] Domestic
- [ ] Non Domestic Accommodation
- [ ] Industrial
- [ ] Commercial
- [ ] Educational
- [ ] Healthcare
- [x] Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yell Marlyn | Registration #: E257490 EW121000

CoC details: Nationwired 15798 Streetlight 113 | [ ] CoC (s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New installation, New Streetlight with M.E.N. board. New Main Neutral bar and circuit protection, New Main Earthing System Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok
polarity
M.E.C. imp < 5 Ohm
M.E.N. link . HRPA #30683774VAS

High Risk Category:

- [ ] Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i)
- [ ] Photovoltaic system – 6A(2)(a)(iv)
- [ ] Electrical medical area – 6A(2)(a)(vi)
- [ ] High voltage installation – 6A(2)(a)(ii)
- [ ] Hazardous area – 6A(2)(a)(v)
- [x] Mains work – 6A(2)(c)
- [ ] Mains parallel generation – 6A(2)(a)(iii)
- [ ] Animal stunning or meat conditioning – 6A(2)(b)
- [ ] Other – please describe.

Declaration

I hereby confirm that the work described above has been done in / ~~part in~~ accordance with the regulations and the ~~installation~~ / part installation on which the work has been done is and will be / ~~not be~~, when energised, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: | Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector:	Gavin Bodey	Registration #:	250720
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 426 820

Location of Installation:

Location details: Greenhill park subdivision, Area M. Streetlight 114 stage 9-15

Location type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial
☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yeli Marlyn	Registration #:	E25/490
			EW121000
CoC details:	Nationwired 15797 Streetlight 114		☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation. New Streetlight with M.E.N. board. New Main Neutral bar and circuit protection, New Main Earthing System. Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.N. imp <.5 Ohm
M.E.N. ok.. HRPA #0059375X45

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 - 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(v) ☐ Electrical medical area - 6A(2)(a)(vi)
☐ High voltage installation - 6A(2)(b)(i) ☐ Hazardous area – 6A(2)(a)(x) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(ii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other - please describe:

Declaration

I hereby confirm that the work described above has been done in accordance with the regulations; and the ~~installation~~/part installation on which the work has been done is, and will be/~~was~~ when unlivened, electrically safe.

(Note. Strike out/delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details

Name of Inspector: Gavin Bodey | Registration #: I250728

Email Address: gavin@bodeyspark.co.nz | Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 107stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeti Martyn | Registration #: E257490

EW121000

CoC details: Nationwired 15791 Streetlight 107 | ☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New installation, New Streetlight with M.E.N. board New Main Neutral bar and circuit protection. New Main Earthing System Bonding of Pole and cabinet door

Specify the regulation(s) and comparison standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS 3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok.
polarity
M.E.C imp 4.6 Ohm
M.E.N link HRPA #0056383B7H

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(v)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(vi) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations; and the ~~installation~~ / part installation on which the work has been done is and will be / ~~not be~~, when enlivened, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] | Date: 19/03/21

AS1-1132 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector: Gavin Bodey — Registration #: I250728

Email Address: gavin@bodeyspark.co.nz — Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 43 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeti Martyn — Registration #: E257450

EW121000

CoC details: Nationwired 15838 — ☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection. New Main Earthing System Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS 3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C. imp < 5 Ohm
M.E.N. link HRPA 4005334304S

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(vi)
☐ High voltage installation – 6A(2)(a)(v) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations; and that the ~~installation~~ / part installation on which the work has been done is and will be / ~~not be~~, when enlivened, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: — Date: 10/03/21

EWRB ROI 04/19

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector:	Gavin Bodey	Registration #:	1250728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 120 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yeti Marlyn	Registration #:	E257490 EW121000
CoC details:	Nationwired 15839		☐ CoC(s) attached

Certifying Electrical Work and CoC details.

What was inspected:

New Installation, New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection, New Main Earthing System. Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok.
polarity
M.E.C. imp < 5 Ohm
M.E.N. link.. HRPA #0058356FEZ

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(vi)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations; and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when enlivened, electrically safe

(Note: Strike out or delete the non-applicable words highlighted in red above.)

Signature: Date: 10/03/21

M31 2152 01/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details

Name of Inspector: Gavin Bodey
Registration #: I250728
Email Address: gavin@bodeyspark.co.nz
Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight108 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeti Martyn
Registration #: E257490
EW121000
CoC details: Nationwired 158310
☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:
New Installation, New Streetlight with M.E.N. board New Main Neutral bar and circuit protection, New Main Earthing System Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection
AS/NZS3000 part 2

What are the results of the inspection:
Earthing and bonding visual ok.
polarity
M.E.C. imp < 5 Ohm
M.E.N. link.　　　　ERPA V0058350B7T

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i)
☐ Photovoltaic system – 6A(2)(a)(v)
☐ Electrical medical area – 6A(2)(a)(iv)
☐ High voltage installation – 6A(2)(a)(ii)
☐ Hazardous area – 6A(2)(a)(iii)
☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(vi)
☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations, and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when connected, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature:　　　　Date: 10/03/21

MBS 1132 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (inspector) details:

Name of Inspector:	Gavin Bodey	Registration #:	250728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhill park subdivision Area M, Streetlight 121 stage 9-15

Location Type:
- [ ] Domestic
- [ ] Non-Domestic Accommodation
- [ ] Industrial
- [ ] Commercial
- [ ] Educational
- [ ] Healthcare
- [x] Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeh Martyn

Registration #: C257490 EW121000

CoC details: Nationwired 167913 Streetlight 121

- [ ] CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New installation, New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection. New Main Earthing System. Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C. imp < 5 Ohm
M.E.N. link. RRPA #0058328Y7Y

High Risk Category:

- [ ] Not to AS/NZS 3000 Part 2 - 6A(2)(a)(i)
- [ ] Photovoltaic system – 6A(2)(a)(iv)
- [ ] Electrical medical area – 6A(2)(a)(vi)
- [ ] High voltage installation – 6A(2)(a)(ii)
- [ ] Hazardous area – 6A(2)(a)(v)
- [x] Mains work – 6A(2)(b)
- [ ] Mains parallel generation – 6A(2)(a)(iii)
- [ ] Animal stunning or meat conditioning – 6A(2)(c)
- [ ] Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when livened, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Natonwired greenhill

Issuer (Inspector) details:

Name of Inspector: Gavin Bodey | Registration #: I250728

Email Address: gavin@bodeyapark.co.nz | Telephone: 021 429 820

Location of Installation:

Location details: GreenHill park subdivision, Area M, Streetlight 122 stage 9-16

Location type: ☐ Domestic ☐ Non Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yell Marlyn | Registration #: E257490 EW121000

CoC details: Nationwired 167814 Streetlight 122 | ☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N. board. New Main Neutral bar and circuit protection, New Main Earthing System. Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C. imp < 5 Ohm
M.E.N. ok.. HRPA #006839079C

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(vi)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe.

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations, and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when connected, electrically safe

(Note: Strike out or delete the inappropriate words highlighted in red above.)

Signature: [signature] Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector: Gavin Bodey | Registration #: I250720
Email Address: gavin@bodeyspark.co.nz | Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 115 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeb Marlyn | Registration #: E257490 EW121000

CoC details: Nationwired 15790 Streetlight 115 ☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection, New Main Earthing System Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M.E.C. imp <5 Ohm
M.E.N. link ICPA #0059370Z4X

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i)
☐ Photovoltaic system – 6A(2)(a)(v)
☐ Electrical medical area – 6A(2)(b)(vi)
☐ High voltage installation – 6A(2)(b)(ii)
☐ Hazardous area – 6A(2)(b)(v)
☑ Mains work – 6A(2)(h)
☐ Mains parallel generation – 6A(2)(a)(iii)
☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe

Declaration

I hereby confirm that the work described above has been done in / ~~part~~ accordance with the regulations; and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when energised, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: | Date: 10/03/21

EWRB 1.0 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details

Name of Inspector:	Gavin Bodey	Registration #:	1250728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhill park subdivision. Area M, Streetlight 116 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial
☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yeji Martyn	Registration #:	E257490
			EW121000
CoC details:	Nationwired 15759 Streetlight 116		☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M.E.N. board New Main Neutral bar and circuit protection. New Main Earthing System. Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS 3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok.
polarity
M.E.C. ins < 5 Ohm
M.E.N. link HRPA #0058377ZGK

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 5A(2)(b)(i) ☐ Photovoltaic system – 6A(2)(e)(iv) ☐ Part of medical area – 6A(2)(b)(iv)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(c)(v) ☑ Mains work – 6A(2)(a)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(d)
☐ Other – please describe.

Declaration

I hereby confirm that the work described above has been done in accordance with the regulations; and the ~~installation~~/part installation on which the work has been done is, and will be / ~~was~~, when energised, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

MBIE1115 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector:	Gavin Bodey	Registration #:	250726
Email Address	gavin@bodeyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 117 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yori Martyn	Registration #:	F257490
			EW121000
CoC details:	Nationwired 16799 Streetlight 117	☐ CoC(s) attached	

Certifying Electrical Work and CoC details:

What was inspected:

New Installation, New Streetlight with M E N board, New Main Neutral bar and circuit protection. New Men Earthing System Bonding of Pole and cabinet door.

Specify the regulation(s) and comparison standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection:

Earthing and bonding visual ok,
polarity
M E C imp <.5 Ohm
M.E.N link HRPA #0058379H8C

High Risk Category:

☐ Not in AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(b)(vi)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(b)(v) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Amenity, storming or mine conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above was/were done *in accordance with the regulations; and the installation/part installation on which the work has been done is, and will be/are safe, when energised, electrically safe.*

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] Date: 10/03/21

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details

Name of Inspector: Gavin Bodey | Registration #: I250728

Email Address: gavin@bodeyspark.co.nz | Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park sub-division, Area M, Streetlight 113 stage 8-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s): Yeli Martyn | Registration #: E257490 EW121000

CoC details: Nationwired 157910 Streetlight 116 ☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected

New Installation New Streetlight with M.E.N. board, New Main Neutral bar and circuit protection, New Main Earthing System Bonding of Pole and cabinet door

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection:

AS/NZS3000 part 2

What are the results of the inspection

Earthing and bonding visual ok,
polarity
M.E.C. imp <.6 Ohm
M.E.N. link ERPA 40058382P4F

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(v)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(vi) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~in part~~ accordance with the regulations, and the ~~installation~~ / part installation on which the work has been done is, and will be / ~~not be~~, when connected, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: | Date: 10/09/21

MBIE 4732 04/17

Electrical Workers Registration Board

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number:

Nationwired greenhill

Issuer (Inspector) details:

Name of Inspector	Gavin Bodey	Registration #:	I250726
Email Address	gavin@bodeyspark.co.nz	Telephone	021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 119 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s)	Yeli Martyn	Registration #.	E257490 EW121000
CoC details:	Nationwired 167912 Streetlight 119		☐ CoC(s) attached

Certifying Electrical Work and CoC details:

What was inspected.

New Installation, New Streetlight with M E N board, New Main Neutral bar and circuit protection, New Main Earthing System.Bonding of Pole and cabinet door.

Specify the regulation(s) and companion standard(s), or identify the certified design, followed when carrying out the inspection

AS/NZS3000 part 2

What are the results of the inspection

Earthing and bonding visual ck,
polarity
M.E.C imp <.5 Ohm
M E N link . FRPA #0050385XCN

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 6A(2)(a)(v)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 6A(2)(b)
☐ Mains parallel generation – 6A(2)(a)(iii) ☐ Animal stunning or meat conditioning – 6A(2)(c)
☐ Other – please describe:

Declaration

I hereby confirm that the work described above has been done in / ~~not in~~ accordance with the regulations, and the ~~installation~~ / part installation on which the work has been done is and will be / ~~not be~~, when connected, electrically safe.

(Note: Strike out or delete the word(s)/phrase(s) highlighted in red above.)

Signature: Date: 10/03/21

MAR 1 ISS 04/21

Supplier's Declaration of Conformity (in accordance with ISO/IEC 17050-1)

Number:	2692777034128
Issuer's Name:	Ibex International Ltd.
Issuer's Address:	PO BOX 9077 Greerton Tauranga 3142

Object of the Declaration: We declare that the items described are Electrically Safe as required in the Electricity (Safety) Regulations 2010 Regulation 80.

MINI STORK 2500LM LENS21 22W S-CAP 3000K BLACK

The Object of the Declaration described above is in conformity with the requirements of the following documents:

Document Number:	Title	Edition / Date of Issue
AS/NZS 3820	Essential Safety Requirements For Electrical Equipment	2009/AMD 1

Additional information

Signed for and on behalf of: Ibex International Ltd.
Tauranga

Date: 4/03/2021

Kingsley Holt

Kingsley Holt Supply Chain & Innovation Manager

F3.10 RAMM STREETLIGHT DATA

(to be completed for each change in streetlight type)

Subdivision and stage/Contract: GREENHILL PARK AREA M STAGE 15

Number of street lights of this type: 4

General

Date Installed: 10/3/21

Control Type: Network Streetlight Feed / Photocell / Other:

Origin of Power Supply: Streetlight Circuit / Metered Power Supply

Light

Manufacturer: VIZILO

Model: MINI STORK

Total Power Consumption (W): 22.3W

Light Height (m): 6m

Tilt Angle (° Degrees): 0°

Outreach

Outreach Type: Curved / Mitre / Other Decorative: MILFORD

Outreach Distance (m): 1m

Pole

Manufacturer: IBEX LIGHTING

Type: Octagonal / Circular / Power / Other Decorative: Tapered

Pole Height (m): 6m

Material: Galvanised Steel / Steel / Other:

Coating: N/A / Painted / Powder Coated

Colour (if coated): BLACK

Mounting: Frangible ground plant / Shear Base

- ☐ Manufacturer's Warranty documents for Poles, Lights and Coatings attached.
- ☐ Shown on as-built drawings.

F3.10 RAMM STREETLIGHT DATA

(to be completed for each change in streetlight type)

Subdivision and stage/Contract: GREENHILL PARK AREA M STAGE 15

Number of street lights of this type: 3

General

Date Installed: 10/3/21

Control Type: (Network Streetlight Feed) / Photocell / Other:

Origin of Power Supply: (Streetlight Circuit) / Metered Power Supply

Light

Manufacturer: VIZULO

Model: MINI STORK

Total Power Consumption (W): 13.5W

Light Height (m): 6m

Tilt Angle (° Degrees): 0°

Outreach

Outreach Type: Curved / Mitre / (Other Decorative: MILFORD)

Outreach Distance (m): 1m

Pole

Manufacturer: IBEX LIGHTING

Type: Octagonal / (Circular) / Power / Other Decorative: Tapered

Pole Height (m): 6m

Material: (Galvanised Steel) / Steel / Other:

Coating: N/A / (Painted) / Powder Coated

Colour (if coated): BLACK

Mounting: (Frangible ground plant) / Shear Base

- ☐ Manufacturer's Warranty documents for Poles, Lights and Coatings attached.
- ☐ Shown on as-built drawings.

APPENDIX 8

Miscellaneous Check Lists and Producer Statements

- Subdivision Works Clearance Application Form
- Subdivision Certification Application Form
- Contractor Producer Statement Form
- Land Transfer Plan LT 548658
- Schedule of Engineering Value
- Developers Tax Invoice
- Consultant Certification Statement Form
- Asbuilt Statement Form

Hamilton City Council
Te kaunihera o Kirikiriroa

Subdivision Works Clearance Application Form

Agent details (where an agent is applying on behalf of the consent holder)

Agent name:	Barry Pearson
Agent company:	S & L
Postal address:	P. O. Box 231, Tauranga, 3140
Telephone:	022 320 9229
Email:	bpearson@sltga.co.nz

Subject Site

Site address:	Popham Road, Greenhill Park, Hamilton		
Legal description:	LT 560839		
Resource consent number:	011.2018.6632	Date consent issued:	05/09/2018
Stage (if applicable):	15	No. of lots (excluding roads/reserves):	27

Clearances required

Certification required: (●) Engineering ( ) Landscaping ( ) Other (please specify)

Works Clearance

Fees and payment

You will be charged for the time spent by staff in preparing for and undertaking engineering works clearance site visits. Refer to Fees and Charges, as set out on our website at www.hamilton.govt.nz for costs.

Payment of fees is due upon invoice which will be issued at s224c subdivision certification stage.

Agent declaration

As a registered professional surveyor/planner, I confirm that:

(●) I am satisfied that the engineering and landscaping physical works have been completed in accordance with the Resource Consent

( ) I accept that my application may be returned if there are outstanding agreements relating to development contribution remissions or valuation of land, or if all information required for works clearance is not submitted

Hamilton City Council
Te kaunihera o Kirikiriroa

Subdivision Certification Application Form

Agent details (where an agent is applying on behalf of the consent holder)

Agent name:	Barry Pearson
Agent company:	S & L
Postal address:	P. O. Box 231, Tauranga, 3140
Telephone:	022 320 9229
Email:	bpearson@sltga.co.nz

Preferred means of contact: ◯ Mail ◯ Email ◉ Phone

Consent holder name

Consent holder name:	Chedworth Properties Limited
Postal address:	P. O. Box 132, Waikato Mail Centre, 3240
Telephone:	07 838 0659
Email:	LT 560839

Debtor details (for invoicing)

Debtor is: ◯ Agent ◉ Owner ◯ Other (please specify) Works Clearance

Debtor's Name:	Chedworth Properties Limited
Postal address:	C/- S & L, P. O. Box 231, Tauranga

Subject Site

Site address:	Popham Road, Greenhill Park, Hamilton
Legal description:	????
Resource consent number:	011.2018.6632
Stage Number:	15

Certification required

Certification required: ◯ s223 ◯ s224(c) ◯ s224(f) ◯ s32(2)(a)

◉ Other (please specify) Work Clearance

Condition(s) of consent requirements

As a registered professional surveyor/planner, I confirm that:

1. For larger/complex consents, I have attended a pre-application meeting with Hamilton City Council staff to review my draft s224c application.
2. I hereby attach all information required to satisfy Hamilton City Council that all conditions specified in the subdivision consent referenced above (in terms of certification required) have been met.
3. I accept that where it is found that not all information required under clause 2 above is provided, this application shall be returned to the address for re-lodgement.
4. Where an engineering or similar professionally prepared plan and supporting information (such as landscaping or ecological plan) has to be approved by council, I have attached written evidence of such approval.
5. Where evidence of completion and approval of all physical works is required (e.g. construction of services, landscape planting). I have attached written evidence of such approval.
6. The required Landonline electronic certification documentation have been prepared and submitted to Hamilton City Council for approval.

Acceptance

◯ I confirm that all of the above have been satisfied.

Name: Barry Pearson Date: 9/4/2021

Send

Send applications to subdivision@hcc.govt.nz, drop off via the duty planner at the Municipal Building Garden Place, between 8am – 4.45pm, Monday to Friday or post to **Planning Guidance Subdivisions, Hamilton City Council, Private Bag 3010, Hamilton 3240**.

Remember to attach:

◯ Conditions of subdivision consent documentation
◯ Works clearance certificate

Send

Send applications to subdivision@hcc.govt.nz, drop off via the duty planner at the Municipal Building Garden Place, between 8am – 4.45pm, Monday to Friday or post to Planning Guidance Subdivisions, Hamilton City Council, Private Bag 3010, Hamilton 3240.

Documentation to provide:

- ◯ The attached checklist
- ◯ All required information listed in the checklist

OFFICE USE ONLY ◯ Documentation saved to TRIM ◯ Authority updated ◯ Acknowledgement sent

Works Clearance Checklist

PART A - QA DOCUMENTATION:

a. General

	Received	Date
Easements required		
Consent notices required		
Power, telecommunication, gas connections certification		
Contractor Certificate		
Producer Statement		

b. Parks

◯ Landscaping Plans Accepted Date:

	Approved by	Date
Final Inspection Checklist		

c. Roading

◯ Engineering Plans Accepted Date:

	Approved by	Date
Subgrade Compaction/Relative Height		
Subbase Compaction/Relative Height		
Basecourse Compaction/Relative Height		
Penetrometer Results		
Clegg Hammer Results		
Benkelman Beam Results		

d. Stormwater

◯ Engineering Plans Accepted Date:

	Approved By	Date
Wetlands and Ponds Management Checklist		
Wetlands and Ponds Inspection Checklist		
Pipe Laying Checklist		
Manhole Checklist		
Trench Backfill Compaction Test		
Catchpit Checklist		
Final Inspection Checklist		
Stormwater device Operations and Maintenance Manual supplied		

e. Wastewater

◯ Engineering Plans Accepted Date:

	Approved By	Date
Pipe Laying Checklist		
Manhole Checklist		
Trench Backfill Compaction Test		
Final Inspection Pipe Network		
Pumping Station Check Forms		
Pressure Test Results		

f. Water

◯ Engineering Plans Accepted Date:

Form/Process	Approved By	Date
Pipe Laying Checklist		
Final Inspection Checklist		
Pressure Test Results		
Bacteriological Test Results		

PART B - ASBUILT DATA:

a. Roading

Data	Received	Checked
RAMM data		
Streetlight Data		
Asbuilt Plans		
DXF Files		

b. Stormwater

Data	Received	Checked
Datasheets		
Asbuilt Plans		
DXF Files		

c. Wastewater

Data	Received	Checked
Datasheets		
Asbuilt Plans		
DXF Files		

d. Water

Data	Received	Checked
Datasheets		
Asbuilt Plans		
DXF Files		

e. Parks

Data	Received	Checked
Datasheets		
Asbuilt Plans		
DXF Files		

f. Finance

Data	Received	Checked
GST Values		
Land Values		
Asset Quantities		

PART C – CONDITIONS/BONDS:

Documentation	Received	Checked
Engineering conditions attached and completed		
Bond requested and quote attached		

SCHEDULE OF LAND AND ASSETS TO VEST IN COUNCIL

Hamilton City Council will use these values to record the assets once ownership has transferred following approval of s224c certification.

GENERAL DETAILS

Subdivision name: Greenhill Park - Stage 15

Site address: Carrs Road, Greenhill Park, Hamilton

HCC application number: 011.2018.6632

DPS number(s): DP 558430

Developer name: Chedworth Properties Limited

Postal address: P. O. Box 132

Suburb: Waikato Mail Centre

City: Hamilton Postal code: 3240

This information is certified as being true and correct

Completed by: ☐ Land owner ☑ Agent ☐ Other (please specify) _____

Name: Barry Pearson

Signature: *Barry Pearson* Date signed: 14-04-2021

SEND

Email this to subdivision@hcc.govt.nz. Alternatively, if you are attending a works clearance pre-application meeting, please bring this completed form with you.

SUMMARY OF LAND AND ASSETS TO VEST IN COUNCIL (excluding GST)

ASSET TYPE		COST/VALUE	REMOVE COUNCIL'S CONTRIBUTION	TOTAL VESTED
Land	(A)			$0
Water supply	(B)			$54,508
Wastewater	(C)			$82,504
Stormwater	(D)			$99,777
Roading	(E)			$156,585
Parks	(F)			$0
Other	(G)			$0
TOTAL (excluding GST)				$393,374

PLANNING GUIDANCE

For general planning guidance enquiries, contact the duty planner weekdays 8am - 4.45pm.
Email: planning.guidance@hcc.govt.nz **Phone:** 07 838 6699

Hamilton City Council
Te kaunihera o Kirikiriroa

SCHEDULE OF LAND AND ASSETS TO VEST IN COUNCIL

LAND, WATER SUPPLY, WASTEWATER AND STORMWATER (All values are to be exclusive of GST)

LAND (A)	DPS	MEASURE (AREA M2)	COST/VALUE	COUNCIL'S CONTRIBUTION
Roading	558430	1746	$156,585	
Recreation reserve	558430		$0	
Local purpose reserve	558430		$0	
Other - please specify				
		TOTAL	$156,585	
		TOTAL VESTED		

WATER SUPPLY (B)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Mains	Metres	180	$9,160	
Ridermains	Metres	40.34	$5,324	
Services	No.	26	$18,330	
Hydrants	No.	2	$5114	
Sluice and peat values	No.	11	$16,580	
Other - please specify				
	TOTAL		$54,508	
	TOTAL VESTED			

WASTEWATER (C)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Mains	Metres	289.6	$55,013	
Manholes	No.	5	$16,594	
Connections	No.	27	$10,897	
Other - please specify				
	TOTAL		$82,504	
	TOTAL VESTED			

STORMWATER (D)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Mains	Metres	655	$64,131	
Manholes	No.	2	$8,602	
Connections	No.	27	$18,202	
Outfalls (inlet/outlet structures)	No.	6	$8,842	
Wetland/rain garden planting	Area (m^2)		$0	
Other - please specify				
	TOTAL		$99,777	
	TOTAL VESTED			

PLANNING GUIDANCE

For general planning guidance enquiries, contact the duty planner weekdays 8am - 4.45pm.
Email: planning.guidance@hcc.govt.nz **Phone:** 07 838 6699

Hamilton City Council
Te kaunihera o Kirikiriroa

SCHEDULE OF LAND AND ASSETS TO VEST IN COUNCIL

ROADING, PARKS AND OTHER (All values are to be exclusive of GST)

ROADING (E)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Pavement	Area (m^2)	1746	$33,523.20	
Surfacing	Area (m^2)	0	$0	
Kerb and channel (full height)	Metres	435	$22,201.60	
Berms	Area (m^2)	2234	$7,483.90	
Footpaths (inc. walkways & cycleways)	Area (m^2)	138	$9,729.00	
Vehicle crossings (excl. residential)	Area (m^2)	0	$0	
Road drainage (catchpits & leads)	No.	0	$0	
Street lighting	No.	0	$0	
Signage	No.	0	$0	
Subsoil drains	Metres	0	$0	
Tactile pavers	No.	0	$0	
Parking and bus bays	Area (m^2)	108	$12,366.00	
Sundries (bridges/culverts/walls/etc)	No.	0		
Other - please specify				
	TOTAL		$85,303.70	
	TOTAL VESTED			

PARKS (F)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Bollards	No.	0		
Landscaping (trees, shrubs)	Area (m^2)	0		
Paths	Area (m^2)	0		
Fencing	Metres	0		
Play equipment	No.	0		
Seats/benches/tables	No.	0		
Other - please specify				
	TOTAL			
	TOTAL VESTED			

OTHER (G)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Buildings	No.	0	$0	
Other - please specify				
Common services Piping 100mm Dia	Metres	71	$965.00	
	TOTAL		$965.00	
	TOTAL VESTED			

PLANNING GUIDANCE

For general planning guidance enquiries, contact the duty planner weekdays 8am - 4.45pm.
Email: planning.guidance@hcc.govt.nz **Phone:** 07 838 6699

Hamilton City Council
Te kaunihera o Kirikiriroa

Title Plan - LT 560839

Survey Number	LT 560839
Surveyor Reference	21539 Greenhill Park Stage 15
Surveyor	Scott Rodney Cadey
Survey Firm	Shumpert and Lipinski Limited Partnership
Surveyor Declaration	

Survey Details

Dataset Description	Lots 407 - 433, 605 and 707 Being a Subdivision Lot 700 DP 558430		
Status	Initiated		
Land District	South Auckland	**Survey Class**	Class A
Submitted Date		**Survey Approval Date**	
		Deposit Date	

Territorial Authorities

Hamilton City

Comprised In

RT 980803

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Lot 407 Deposited Plan 560839	Fee Simple Title	0.0461 Ha	990750
Lot 408 Deposited Plan 560839	Fee Simple Title	0.0416 Ha	990751
Lot 409 Deposited Plan 560839	Fee Simple Title	0.0434 Ha	990752
Lot 410 Deposited Plan 560839	Fee Simple Title	0.0219 Ha	990753
Lot 411 Deposited Plan 560839	Fee Simple Title	0.0322 Ha	990754
Lot 412 Deposited Plan 560839	Fee Simple Title	0.0449 Ha	990755
Lot 413 Deposited Plan 560839	Fee Simple Title	0.0367 Ha	990756
Lot 414 Deposited Plan 560839	Fee Simple Title	0.0449 Ha	990757
Lot 415 Deposited Plan 560839	Fee Simple Title	0.0367 Ha	990758
Lot 416 Deposited Plan 560839	Fee Simple Title	0.0449 Ha	990759
Lot 417 Deposited Plan 560839	Fee Simple Title	0.0348 Ha	990760
Lot 418 Deposited Plan 560839	Fee Simple Title	0.0315 Ha	990761
Lot 419 Deposited Plan 560839	Fee Simple Title	0.0500 Ha	990762
Lot 420 Deposited Plan 560839	Fee Simple Title	0.0150 Ha	990763
Lot 421 Deposited Plan 560839	Fee Simple Title	0.0500 Ha	990764
Lot 422 Deposited Plan 560839	Fee Simple Title	0.0315 Ha	990765
Lot 423 Deposited Plan 560839	Fee Simple Title	0.0348 Ha	990766
Lot 424 Deposited Plan 560839	Fee Simple Title	0.0367 Ha	990767
Lot 425 Deposited Plan 560839	Fee Simple Title	0.0446 Ha	990768
Lot 426 Deposited Plan 560839	Fee Simple Title	0.0450 Ha	990769
Lot 427 Deposited Plan 560839	Fee Simple Title	0.0150 Ha	990770
Lot 428 Deposited Plan 560839	Fee Simple Title	0.0406 Ha	990771
Lot 429 Deposited Plan 560839	Fee Simple Title	0.0306 Ha	990772
Lot 430 Deposited Plan 560839	Fee Simple Title	0.0450 Ha	990773

Landonline

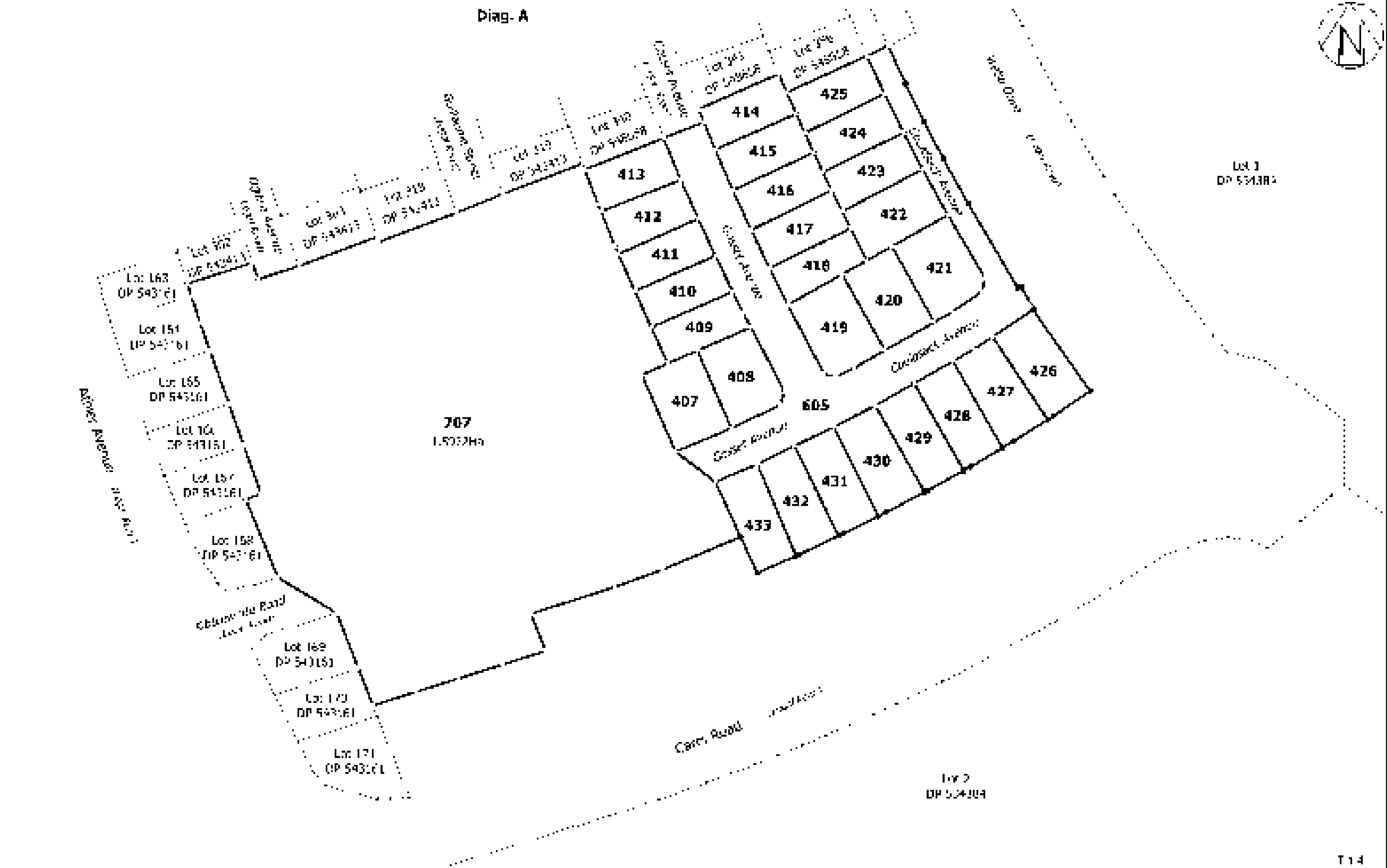
Toitu te Land whenua Information New Zealand

Title Plan - LT 560839

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Lot 131 Deposited Plan 560839	Fee Simple Title	0.0400 Ha	990774
Lot 132 Deposited Plan 560839	Fee Simple Title	0.0400 Ha	990775
Lot 133 Deposited Plan 560839	Fee Simple Title	0.0400 Ha	990776
Lot 605 Deposited Plan 560839	Vesting on Deposit for Road	0.7154 Ha	
Lot 707 Deposited Plan 560839	Fee Simple Title	1.5972 Ha	990777
Total Area		2.4326 Ha	

Diag. A



T 1 4

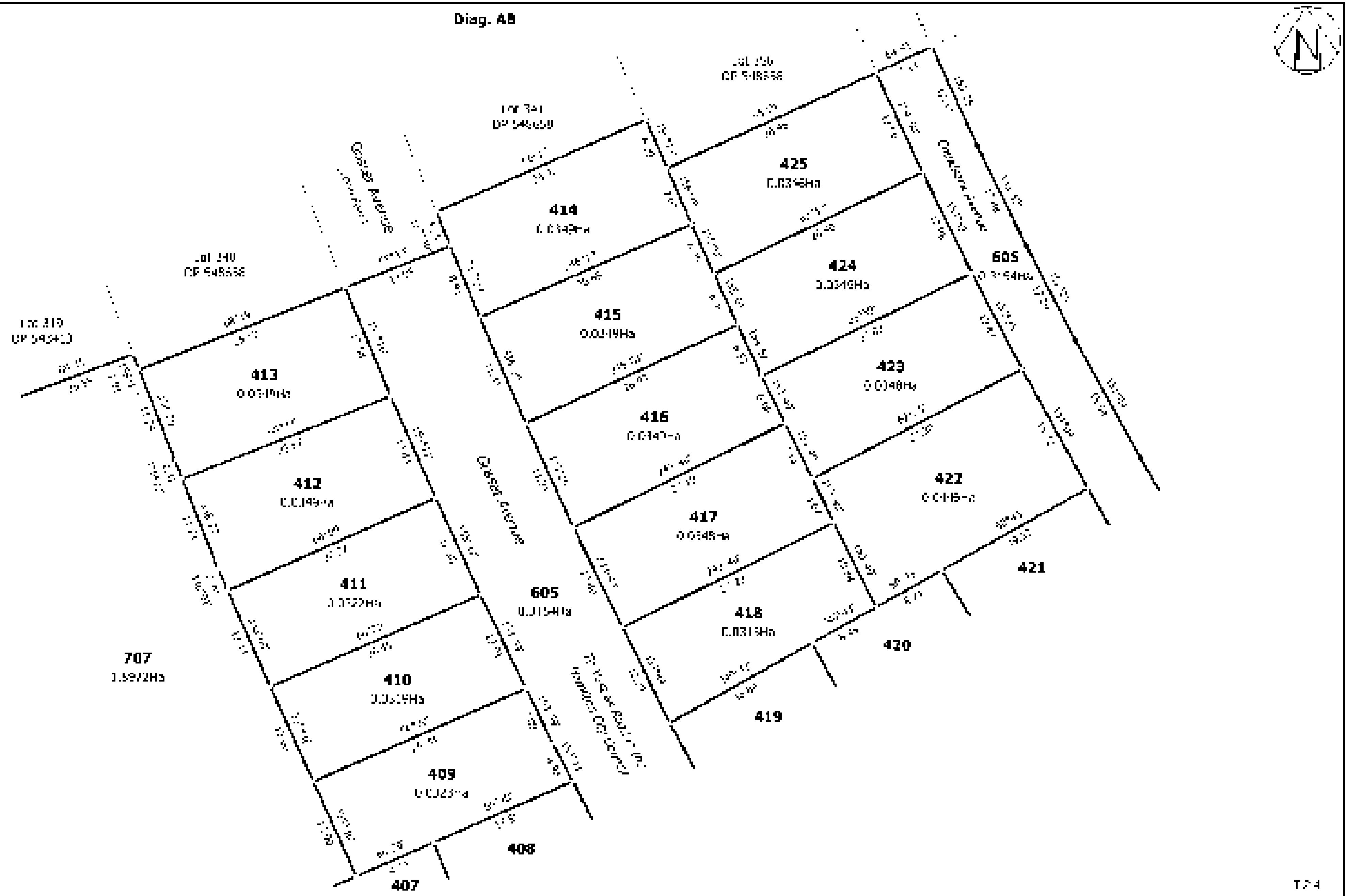
Land District South Auckland

Digitally Generated Plan

Lots 407 - 433, 605 and 707 Being a Subdivision Lot 706 DP 558430

Surveyor Scott Rodney Cailey

Title Plan
LT 560839
DRAFT



T2-4

Land District South Auckland

Digitally Generated Plan

Lots 407 - 433, 605 and 707 Being a Subdivision Lot 706 DP 556430

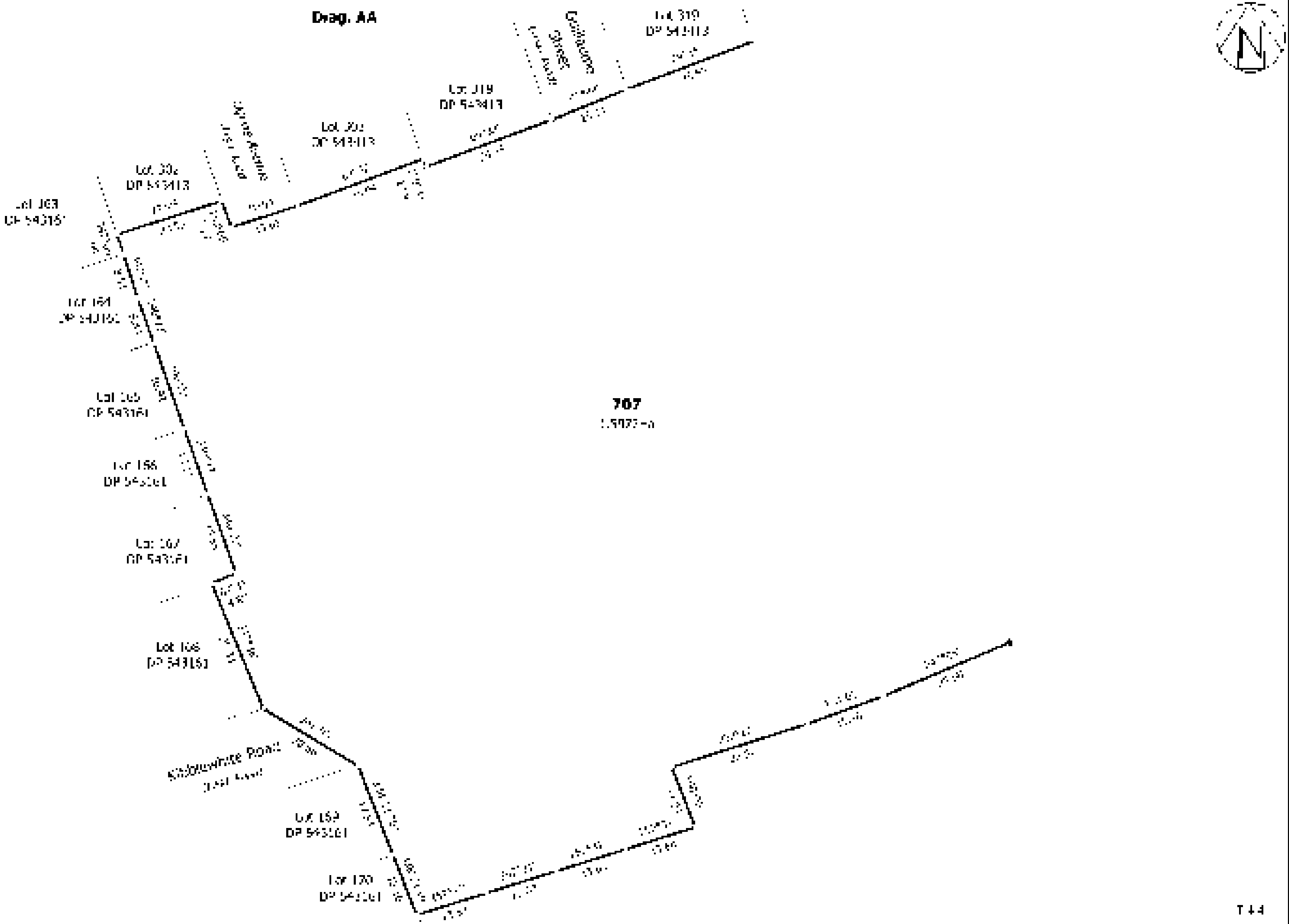
Surveyor Scott Rodney Carley

Title Plan
LT 560839
DRAFT

T 3.4

Land District: South Auckland	Lots 407 - 433, 605 and 707 Being a Subdivision Lot 706 DP 556430	Surveyor: Scott Rodney Cailey	Title Plan
Digitally Generated Plan		Firm: Thompson and Joseph Limited Perth	LT 560839 DRAFT

Diag. AA



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Land District South Auckland

Digitally Generated Plan

Lots 407 - 433, 605 and 707 Being a Subdivision Lot 706 DP 556430

Surveyor Scott Rodney Cailey

Title Plan
LT 560839
DRAFT

APPENDIX 4 ii)

PRODUCER STATEMENT — CONSTRUCTION

CONTRACTOR'S CERTIFICATE UPON COMPLETION OF SUBDIVISIONAL WORK

ISSUED BY : Online Contractors 2016 Ltd
(Contractor)

TO : Chedworth Properties Ltd
(Principal)

TO BE SUPPLIED TO: Hamilton City Council
(Territorial Authority)

IN RESPECT OF : Greenhill Park Stage 15
(Description of subdivisional work)

AT : Gosset Ave and Couldsack Ave, Greenhill Park
(Address)

Online Contractors 2016 Ltd has contracted to Chedworth Properties Ltd
(Contractor) *(Principal)*

to carry out and complete certain subdivisional work in accordance with a contract, titled Contract No. ……
for Earthworks and subdivision civil works ("the contract")

I Dan Hopper a duly authorised representative of Online Contractors 2016 Ltd
(Duly Authorised Agent) *(Contractor)*

hereby certify that Onlne Contractors 2016 Ltd

has carried out and completed the subdivisional works, other than those outstanding works listed below, in accordance with the contract.

Dan Hopper Date 7/4/2021
(Signature of Authorised Agent on behalf of)

Online Contractors 2016 Ltd
(Contractor)

PO Box 21187, Rototuna, Hamilton
(Address)

Outstanding Works

NZS 3910:2013 Conditions of contract for building and civil engineering construction

SCHEDULE 6 – FORM OF PRODUCER STATEMENT - CONSTRUCTION

ISSUED BY	ONLINE CONTRACTORS 2016 LTD
TO	CHEDWORTH PROPERTIES LTD
IN RESPECT OF	GREENHILL PARK STAGE 15 INCLUDING: SUBDIVISION CIVIL WORKS, ROADING AND EARTHWORKS
AT	GREENHILL PARK, HAMILTON

ONLINE CONTRACTORS 2016 LTD has contracted to *CHEDWORTH PROPERTIES LTD* to carry out and complete certain building works in accordance with a Contract titled *GREENHILL PARK STAGE 15.*

I Daniel Hopper a duly authorised representative of *ONLINE CONTRACTORS 2016 LTD* believe on reasonable grounds that *ONLINE CONTRACTORS 2016 LTD* as carried out and completed:

☑ All

☐ Part only as specified in the attached particulars of the contract works in accordance with the Contract.

Dan Hopper — 7/4/21

Signature of Authorised Agent on behalf of — *Date*

ONLINE CONTRACTORS 2016 LTD
PO BOX 21187
ROTOTUNA
HAMILTON 3256

APPENDIX 4 i)

CERTIFICATION UPON COMPLETION OF ROADS, PIPELINES AND OTHER SERVICES

ISSUED BY: Barry Pearson
(suitably qualified professional)

TO: Chedworth Properties Limited
(Development Owner)

TO BE SUPPLIED TO: Hamilton City Council
(Territorial Authority)

IN RESPECT OF: Greenhill Park - Stage 15
(Description of Development Project)

AT: Popham Road, Greenhill Park, Hamilton, New Zealand

(Address)

S & L has been engaged by Chedworth Properties limited
(Survey Firm) *(Development Owner)*

to provide construction observation, review and certification services in respect of the above development which is described in the specification and shown on the drawings numbered 3411915-CA-2010 to 3411915-CA-2079 approved by Hamilton City Council
(Territorial Authority)

I have sighted the Hamilton City Council consent and conditions of consent to the
(Territorial Authority)
Development and the approved specification and drawings.

As an independent professional, I or personnel under my control, have carried out periodic reviews of the works appropriate to the engagement and based upon these reviews, information supplied by the contractor during the course of the works and the contractor's certification upon completion of the works (copy attached) I **BELIEVE ON REASONABLE GROUNDS** that the works, other than those outstanding works listed below, have been completed in accordance with the above consent and sound engineering practice.

B. J. Pearson Date 12/4/2021
(Signature suitably qualified Professional)

CMEngNZ, CPEng Member CSNZ ☐ NZIS ☐
(Professional Qualifications)

36 Kereiti Street, Mount Maunganui ACENZ ☐ IPENZ ☐
(Address)

CPEng ☒

Outstanding Works

Nil

APPENDIX 4 iii)

HAMILTON CITY COUNCIL

CERTIFICATE FOR AS-BUILT DRAWINGS

Greenhill Park - Stage 15 ..... **DEVELOPMENT**

I, Barry Pearson, Chartered Professional Engineer/Surveyor, hereby certify that all of the information shown on the "as built" drawings and spreadsheets is correct as to location (x, y and z co-ordinates), size, materials. This applies to the following "as built" drawings:

Drawing No.	**Title**
21879-M-15-WW1-Rev AB	Stage 15 Wastewater Asbuilt Plan
21879-M-15-W1 Rev AB	Stage 15 Water Reticulation Asbuilt Plan
21879-M-15-SW1 Rev AB	Stage 15 Stormwater Asbuilt Plan
21879-M-15-R1-Rev AB	Stage 15 Roading Asbuilt Plan
.....	.....
.....	.....

Barry Pearson

Chartered Professional Engineer/Surveyor

14/4/2021

Date

Strategic Development Unit
Works Clearance Checklist

Note: Please refer to the Regional Infrastructure Technical Specifications for testing requirements and guidelines.

Consent Ref: 11.2018.6632 **Site Address: Webb Drive, Greenhill Park**

New Street Name: Stage 15 – Greenhill Park **Development Engineer:**

Documentation	Completed	Date	Notes
General			
GST register for all vested asset (PG L4 and PG L5)			
Upsize contribution documentation	N/A		
WEL completion certificate	Y	8/4/2021	Attached
Gas completion certificate (where necessary)	Y	7/4/2021	Attached
UFF completion certificate	Y	27/3/2021	Attached
Roading			
Completion Certificate (PS4 or similar)	Y	Various	Attached (schedule 6, App 4i, 4ii and 4iii)
Subgrade			
- Stringing or survey of prepared surface (relative shape and height)	Y	1/3/2021	Attached
- Compaction (natural subgrade – Scala, SIL sand- Scala, SIL brown rock – Clegg)	Y	22-1-2021	Attached (Clegg results)
Subbase			No subbase aggregate in Stage 15
- Stringing (relative shape and height)	N/A		
- Compaction (clegg)	N/A		
- Nuclear densometer (NDMS)	N/A		
Basecourse			

- Stringing (relative shape and height)	Y	15-3-21 Roads 22, 37 & 38	Attached
- Compaction (clegg)	Y	12-3-21 Roads 22, 37 & 38	Attached
- Nuclear densometer (NDMS)	Y	16-3-21 Roads 22, 37 & 38	Attached
- Benkelman beam test	Y	17-3-21 Roads 22, 37 & 38	Attached
RAMM Pavement	Y	8-4-2021	Attached
RAMM Surfacing	Y	1/4/2021	Attached
Streetlight			
Asbuilt Plan	Y	14-4-2021	Attached
RAMM Streetlight	Y	10/3/2021	Attached
Copy of approved application for new connection		8-4-2021	Attached (WEL work clearance)
Producer Statement	Y	10/11/2020	Attached
CoC or ESC signed by authorised person	Y	9/3/2021	Attached
Asbuilt in format approved by WEL		8-4-2021	Attached (WEL work clearance)
Confirmation of practical completion or 224c sign off		8-4-2021	Attached (WEL work clearance)
WEL Networks approval sheet (Written confirmation from WEL for the acceptance of all underground cabling and circuitry)		8-4-2021	Attached (WEL work clearance)
Manufacturer's Warranty Documents	Y	4/3/2021	Attached
Road Drainage			
Asbuilt plan (subsoil/catchpit/leads	Y	14-4-2021	Attached
Secondary flow path	Y	14-4-2021	Attached
Signage and Marking Asbuilt Plan	Y	14-4-2021	Attached
Water			
Water as-built plan	Y	14-4-2021	Attached
Data Sheet	Y	14-4-2021	Attached

Pressure test certificate	Y	4/2/2021	Attached
DXF (if >2 lots)	N/A		
Bacteriological test result	Y	16/2/2021	Attached
Hydrant test (where necessary)	N/A		
RITS checklists			
- F6.1 Water reticulation design confirmation,	N/A		Beca design
- F6.2 Water reticulation pipe laying checklist,	7/4/2021		Attached
- F6.3 Water reticulation final inspection checklist	8/4/2021		Attached
Wastewater			
Wastewater as-built plan	Y	14-4-2021	Attached
Data sheet	Y	14-4-2021	Attached
DXF (if >2 lots)	N/A		
CCTV investigation	Y	12-4-2021	Submission email attached
Pipe Pressure test	Y	16/11/2020	Attached
Manhole pressure test	Y	16/11/2020	Attached
Trench backfill	Y	Not dated	Attached (Clegg results)
RITS checklist			
- F5.1 wastewater design confirmation,	N/A		Beca design
- F5.2 Wastewater pipe laying checklist,	Y	16/12/2020	Attached
- F5.3 Wastewater manhole checklist,	Y	16/12/2020	Attached
- F5.4 Wastewater trench backfill test summary,	Y	16/12/2020	Attached
- F5.6 Wastewater pipe network- final inspection checklist,	Y	9/3/2021	Attached

- F5.7 Pump station control programming checklist	N/A		
Stormwater			
Stormwater as-built plan	Y	14-4-2021	Attached
Data sheet	Y	14-4-2021	Attached
DXF (if >2 lots)	N/A		
Wetland as-built plan (see RITS for minimum details required)	N/A		
Completed planting plan (confirmation that plants are in accordance with the accepted plan)			To be provided
Proprietary device completion certificate	N/A		
Final operation and maintenance manual	N/A		
CCTV investigation	Y	12-4-2021	Submission email attached.
Trench backfill	Y	Not dated	Attached (Clegg Results)
RITS checklist			
- F4.1 Stormwater design checklist,	N/A		Beca design
- F4.2 Stormwater pipe laying checklist,	Y	14/12/2020	Attached
- F4.3 Stormwater manhole checklist,	Y	14/12/2020	Attached
- F4.4 Stormwater trench backfill compaction test summary,	Y	14/12/2020	Attached
- F4.5 Stormwater catchpit checklist,	Y	14/12/2020	Attached
- F4.6 Stormwater pipe network final inspection checklist,	Y	9/3/2021	Attached
- F4.7 Wetland construction inspection checklist,	N/A		
- F4.8 Wetland and inspection/Sign off checklist	N/A		

- Final Operation and Maintenance Manual	N/A		
- Final Water Impact Assessment	N/A		
Parks and Open Spaces Street trees/planting sign off	As Built plan		
Bond			
Quote	N/A		
Signed bond form			To be supplied from HCC
Other:	N/A		

APPENDIX 9

As Built Drawings

- 21879-M-15-WW1 Rev AB – Stage 15 Wastewater Asbuilt Plan
- 21879-M-15-W1 Rev AB – Stage 15 Water Reticulation Asbuilt Plan
- 21879-M-15-SW1 Rev AB – Stage 15 Stormwater Asbuilt Plan
- 21879-M-15-R1 Rev AB – Stage 15 Roading Asbuilt Plan

LOCALITY PLAN
SCALE 1:4000

STREETLIGHT COORDINATES		
NAME	EASTING	NORTHING
SL133	447397.26	702957.67
SL134	447421.46	702913.42
SL135	447421.69	702885.72
SL136	447334.76	702918.93
SL137	447359.12	702870.26
SL138	447379.11	702869.65
SL139	447362.60	702852.48

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www.sltga.co.nz

NOTES:

1. HCC REF: 011.2018.00006632.001

LEGEND:

- ABUTTAL
- BOUNDARY
- EDGE OF SEAL
- VERTICAL KERB
- MOUNTABLE KERB
- STAGE PERIMETER
- SUBSOIL DRAINS
- FOOTPATH
- STREETLIGHT
- TREE
- OVERLAND FLOW PATH
- PONDING

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NW	SRC	NF	04/21
AB	AS-BUILT	NW	SRC	NF	04/21

	NAME	DATE		NAME	DATE
SURVEYED	SRC	03.21	DESIGNED	BECA	08.18

COORDINATE SYSTEM: MT EDEN 2000 CIRCUIT
ORIGIN OF COORDINATES: ALP 4 DP 534481
HEIGHT DATUM: MOTURIKI DATUM 1953
ORIGIN OF HEIGHT: SS 507 SO 42451 RL = 44.04m

TITLE

STAGE 15 ROADING AS- BUILT PLAN

PREPARED FOR

Chedworth Properties Limited
GREENHILL

ORIGINAL SCALES @ A3: 1:750 DO NOT SCALE DIMENSIONS
STATUS: AS-BUILT
DRAWING NO: 21879-M-15-R1
REVISION: AB

C:\Users\nparkinson\Downloads\21879-M-15 - CADM - Stage 15 As-builts(AB)\21879-M-15 - CADM - Stage 15 As-builts\21879-M-15 - CADM - Stage 15 As-builts.dwg - Plotted: 15/04/2021

LOCALITY PLAN
SCALE 1:4000

STORMWATER MANHOLES COORDINATES									
MH ID	DIA	EASTING	NORTHING	LID LEVEL	INVERT OUT	INVERT IN	INVERT IN	INVERT IN	INVERT IN
SWM24142	1050	447344.68	702905.13	39.23	37.31	37.43	37.43	37.82	
SWMH 19.1	1200	447305.16	702835.08	TBC	37.26	37.28	37.68	37.68	37.28
SWMH 21.1	1050	447413.40	702886.29	39.94	38.24	38.38			
SWMH 21.2	1050	447376.61	702865.14	39.57	37.90	38.23	37.91	38.23	

STORMWATER PIPELINES								
UPSTREAM MH	DOWNSTREAM MH	PIPE DIA	MATERIAL	CLASS	PIPE LENGTH	PIPE GRADE	UPSTREAM IL	DOWNSTREAM IL
SWMH 21.2	SWMH 19.1	375	RCRRJ	4	77.5	1:125	37.90	37.28
SWMH 21.1	SWMH 21.2	375	RCRRJ	4	42.4	1:128	38.24	37.91
SWM24142	SWM24143	375	RCRRJ	4	57.6	1:192	37.31	37.01

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NOTES:

1. HCC REF: 011.2018.00006632.001
2. CP'S CONNECTED TO MANHOLES BY Ø225 DIA uPVC SN16 UNLESS OTHERWISE STATED
3. LOT CONNECTIONS ARE Ø100 FOR SINGLE AND Ø150 FOR DOUBLE UNLESS OTHERWISE STATED
4. LOT CONNECTIONS AND LATERALS LINE PLOTTED FROM DATA SUPPLIED BY WEST CONSTRUCTION & ONLINE CONTRACTORS

LEGEND:

- ABUTTAL
- BOUNDARY
- STAGE PERIMETER
- OVERLAND FLOW PATH
- STORMWATER MAIN
- STORMWATER CONNECTION
- STORMWATER EXISTING
- SW MANHOLE NEW
- SW MANHOLE EXISTING
- SW CONNECTION
- CATCHPIT

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NW	SRC	NF	04/21
AB	AS-BUILT	NW	SRC	NF	04/21

	NAME	DATE		NAME	DATE
SURVEYED	SRC	03.21	DESIGNED	BECA	08.18

COORDINATE SYSTEM: MT EDEN 2000 CIRCUIT
ORIGIN OF COORDINATES: ALP 4 DP 534481
HEIGHT DATUM: MOTURIKI DATUM 1953
ORIGIN OF HEIGHT: SS 507 SO 42451 RL = 44.04m

TITLE

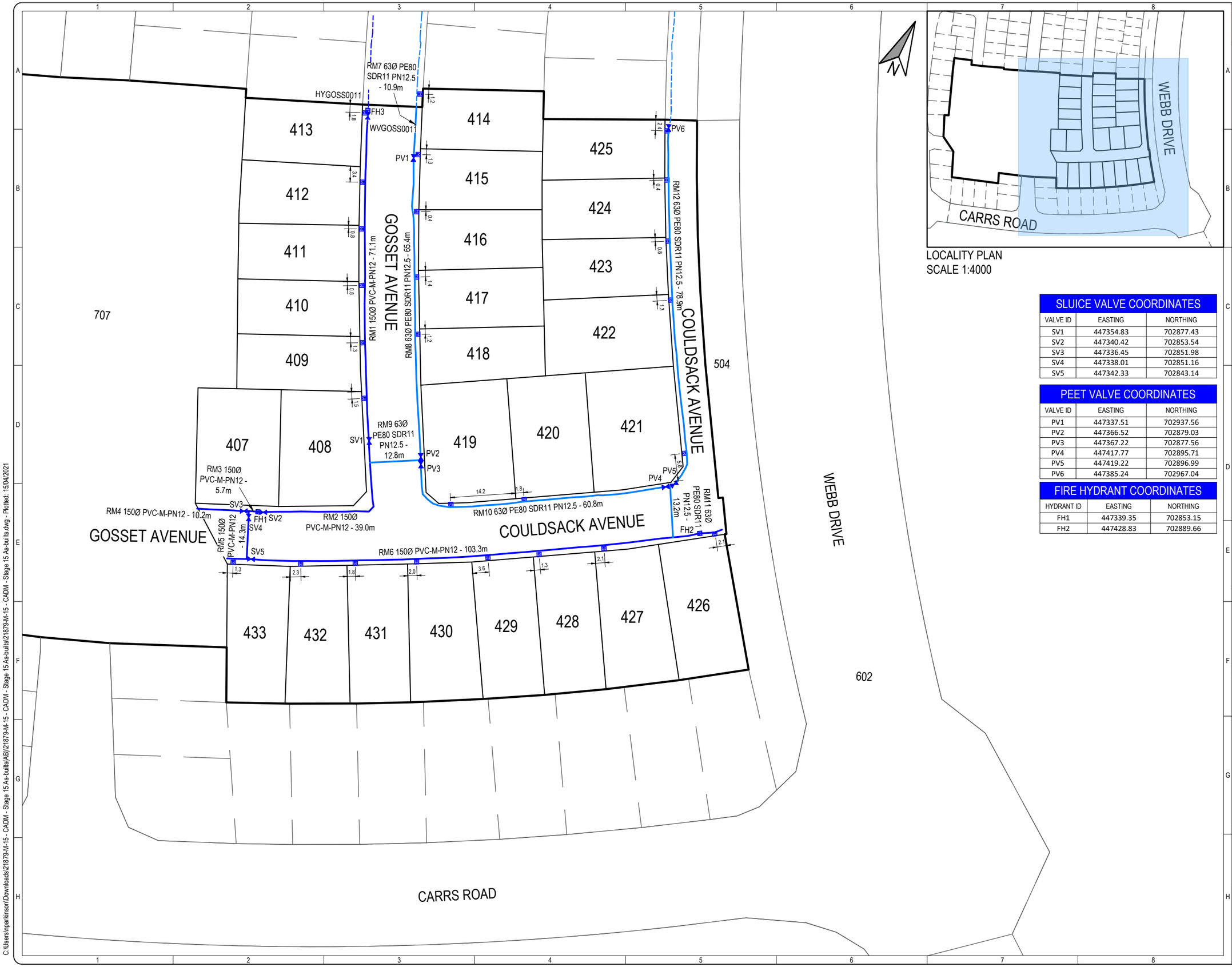
STAGE 15 STORMWATER AS- BUILT PLAN

PREPARED FOR

Chedworth Properties Limited
GREENHILL

ORIGINAL SCALES @ A3: 1:750
DO NOT SCALE DIMENSIONS
STATUS: AS-BUILT
DRAWING NO: 21879-M-15-SW1
REVISION: AB

C:\Users\nparkinson\Downloads\21879-M-15 - CADM - Stage 15 As-builts(AB)\21879-M-15 - CADM - Stage 15 As-builts\21879-M-15 - CADM - Stage 15 As-builts.dwg - Plotted: 15/04/2021



LOCALITY PLAN
SCALE 1:4000

SLUICE VALVE COORDINATES		
VALVE ID	EASTING	NORTHING
SV1	447354.83	702877.43
SV2	447340.42	702853.54
SV3	447336.45	702851.98
SV4	447338.01	702851.16
SV5	447342.33	702843.14

PEET VALVE COORDINATES		
VALVE ID	EASTING	NORTHING
PV1	447337.51	702937.56
PV2	447366.52	702879.03
PV3	447367.22	702877.56
PV4	447417.77	702895.71
PV5	447419.22	702896.99
PV6	447385.24	702967.04

FIRE HYDRANT COORDINATES		
HYDRANT ID	EASTING	NORTHING
FH1	447339.35	702853.15
FH2	447428.83	702889.66

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NOTES:

1. HCC REF: 011.2018.00006632.001
2. WATERMAINS PLOTTED FROM DATA SUPPLIED BY ONLINE CONTRACTORS

LEGEND:

- ABUTTAL
- BOUNDARY
- STAGE PERIMETER
- WATER MAIN
- EXISTING WATER MAIN
- RIDERMAIN
- WATER METER
- VALVE - NEW
- VALVE - EXISTING
- FIRE HYDRANT - NEW

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NW	SRC	NF	04/21
AB	AS-BUILT	NW	SRC	NF	04/21

	NAME	DATE		NAME	DATE
SURVEYED	SRC	03.21	DESIGNED	BECA	08.18

COORDINATE SYSTEM: MT EDEN 2000 CIRCUIT
ORIGIN OF COORDINATES: ALP 4 DP 534481
HEIGHT DATUM: MOTURIKI DATUM 1953
ORIGIN OF HEIGHT: SS 507 SO 42451 RL = 44.04m

TITLE

STAGE 15 WATER RETICULATION AS- BUILT PLAN

PREPARED FOR

Chedworth Properties Limited
GREENHILL

ORIGINAL SCALES @ A3: 1:750
DO NOT SCALE DIMENSIONS

STATUS: AS-BUILT

DRAWING NO: 21879-M-15-W1

REVISION: AB

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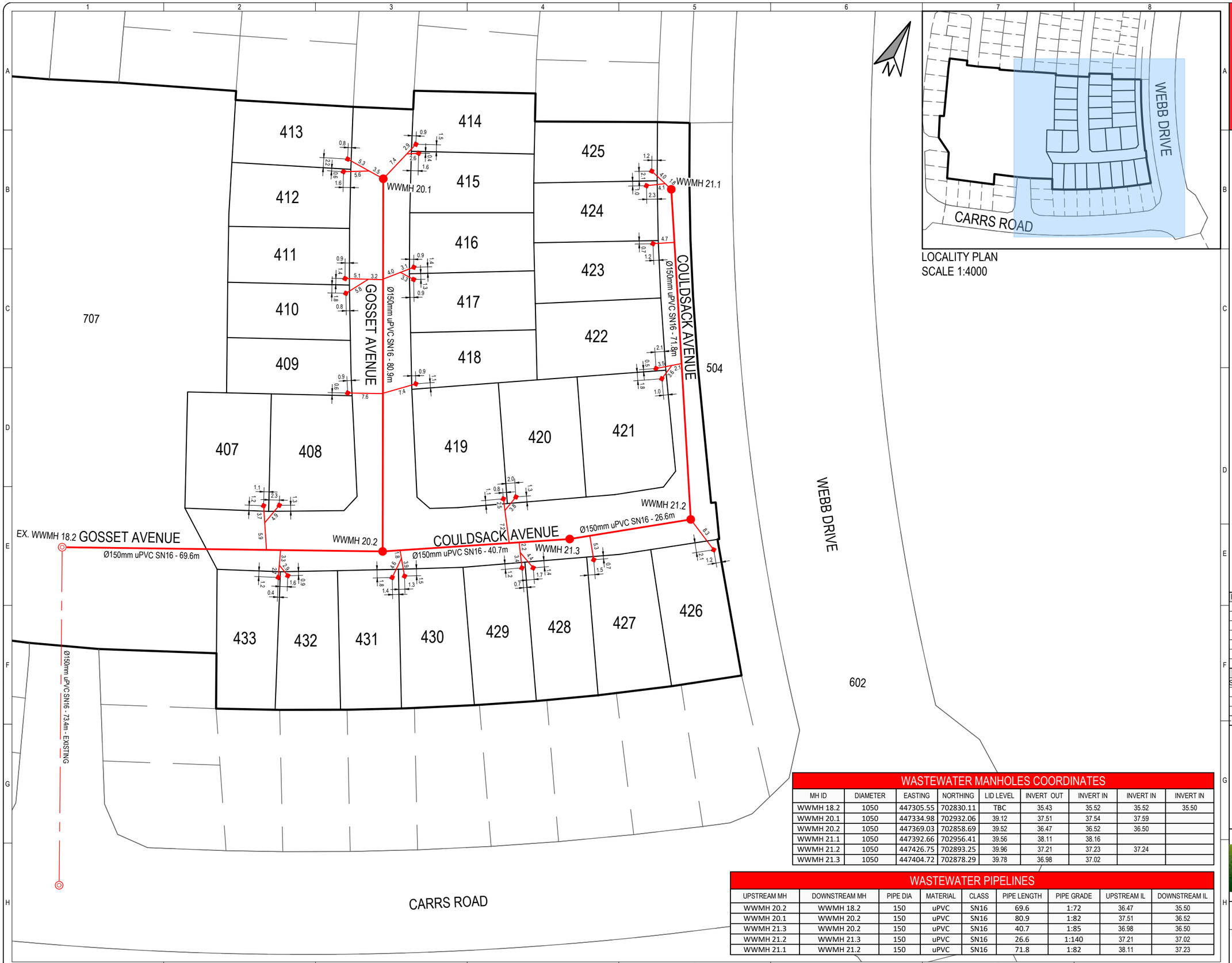

LOCALITY PLAN
SCALE 1:4000

WASTEWATER MANHOLES COORDINATES

MH ID	DIAMETER	EASTING	NORTHING	LID LEVEL	INVERT OUT	INVERT IN	INVERT IN	INVERT IN
WWMH 18.2	1050	447305.55	702830.11	TBC	35.43	35.52	35.52	35.50
WWMH 20.1	1050	447334.98	702932.06	39.12	37.51	37.54	37.59	
WWMH 20.2	1050	447369.03	702858.69	39.52	36.47	36.52	36.50	
WWMH 21.1	1050	447392.66	702956.41	39.56	38.11	38.16		
WWMH 21.2	1050	447426.75	702893.25	39.96	37.21	37.23	37.24	
WWMH 21.3	1050	447404.72	702878.29	39.78	36.98	37.02		

WASTEWATER PIPELINES

UPSTREAM MH	DOWNSTREAM MH	PIPE DIA	MATERIAL	CLASS	PIPE LENGTH	PIPE GRADE	UPSTREAM IL	DOWNSTREAM IL
WWMH 20.2	WWMH 18.2	150	uPVC	SN16	69.6	1:72	36.47	35.50
WWMH 20.1	WWMH 20.2	150	uPVC	SN16	80.9	1:82	37.51	36.52
WWMH 21.3	WWMH 20.2	150	uPVC	SN16	40.7	1:85	36.98	36.50
WWMH 21.2	WWMH 21.3	150	uPVC	SN16	26.6	1:140	37.21	37.02
WWMH 21.1	WWMH 21.2	150	uPVC	SN16	71.8	1:82	38.11	37.23

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NOTES:

1. HCC REF: 011.2018.00006632.001
2. LOT CONNECTIONS AND LATERAL LINES PLOTTED FROM DATA SUPPLIED BY WEST CONSTRUCTION
3. LOT CONNECTIONS ARE Ø100 uPVC SN16 RR UNLESS SHOWN OTHERWISE

LEGEND:

- ABUTTAL
- BOUNDARY
- STAGE PERIMETER
- WASTEWATER MAIN - NEW
- WASTEWATER CONNECTION
- WASTEWATER - EXISTING
- WW MANHOLE - NEW
- WW MANHOLE - EXISTING
- WASTEWATER CONNECTION

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NW	SRC	NF	04/21
AB	AS-BUILT	NW	SRC	NF	04/21

	NAME	DATE		NAME	DATE
SURVEYED	SRC	03.21	DESIGNED	BECA	08.18

COORDINATE SYSTEM: MT EDEN 2000 CIRCUIT
ORIGIN OF COORDINATES: ALP 4 DP 534481
HEIGHT DATUM: MOTURIKI DATUM 1953
ORIGIN OF HEIGHT: SS 507 SO 42451 RL = 44.04m

TITLE

STAGE 15 WASTEWATER AS- BUILT PLAN

PREPARED FOR

Chedworth Properties Limited
GREENHILL

ORIGINAL SCALES @ A3: 1:750
DO NOT SCALE DIMENSIONS

STATUS: AS-BUILT

DRAWING NO: 21879-M-15-WW1

REVISION: AB

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APPENDIX 10

Asset Spreadsheets – Hard copy

- Water asset sheets
- Wastewater asset sheets
- Stormwater asset sheets

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

STORMWATER MANHOLES

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** Apr-21

Stage: Stage 15

(North Rim) (Centre) (Centre)

Plan ID	Manhole ID	Property ID (Lot No. or Address)	Street Name	Street Type	Lid Level (m)	Invert Level (m)	MH Width/Diam (mm)	Easting Coordinate	Northing Coordinate	Service Status	Install Date	Asset Value	Comments
21879-M-15-SW1	SWM24142	LOT 410	GOSSET	AVENUE	39.23	37.31	1050	447344.68	702905.13	E	Aug-20	N/A	EXISTING MH FROM STAGE 12 (S&L Ref SWMH 17.1)
21879-M-15-SW1	SWMH 19.1	LOT 707	N/A	NA/	TBC	37.26	1200	447305.16	702835.08	E	Dec-20	N/A	EXISTING MH FROM STAGE 13 (S&L Ref SWMH 19.1) LID LEVEL TO BE PROVIDED IN STAGE 14 AREA M
21879-M-15-SW1	SWMH 21.1	LOT 427	COULDSACK	AVENUE	39.94	38.24	1050	447413.40	702886.29	N	Dec-20	$4,301	
21879-M-15-SW1	SWMH 21.2	LOT 430	COULDSACK	AVENUE	39.57	37.90	1050	447376.61	702865.14	N	Dec-20	$4,301	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

STORMWATER PIPELINES

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** Apr-21

Stage: Stage 15

Plan ID	Upstr MH/ Asset ID	Dwnstr MH/ Asset ID	Street Name	Street Type	Physical Location (where necessary)	Pipe Diameter (mm)	Pipe Length (m)	Pipe Material	Joint Type	Invert Level Upstr (m)	Invert Level Dwnstr (m)	Service Status	Install Date	Asset Value	Comments
21879-M-15-SW1	SWMH 21.2	SWMH 19.1	GOSSET	AVENUE	ROADWAY	375	77.5	RC	RR	37.90	37.28	N	Dec-20	$24,953	
21879-M-15-SW1	SWMH 21.1	SWMH 21.2	COULDSACK	AVENUE	ROADWAY	375	42.4	RC	RR	38.24	37.91	N	Dec-20	$13,652	
21879-M-15-SW1	SWM24142	SWM24143	GOSSET	AVENUE	ROADWAY	375	57.6	RC	RR	37.31	37.01	E	Aug-20	N/A	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

STORMWATER CONNECTION/SERVICE LINE

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors
Development/Subdivision/Job: Greenhill Park
Stage: Stage 15
Prepared by: S & L
Date: Apr-21

Plan ID	Upstr MH/ Asset ID	Dwnstr MH/ Asset ID	Property ID (Lot No. or Address)	Street Name	Street Type	Physical Location (where necessary)	Service Pipe Diam (mm)	Service Pipe Length (m)	Service Pipe Material	Invert Level At Private End (m) OR Depth (m)	Easting Coordinate	Northing Coordinate	Distance from left (LB) or right (RB) boundary (m)	Distance from front (FB) or back (BB) boundary (m)	Service Status	Install Date	Asset Value	Comments
21879-M-15-SW1	SWMH21.2	SWMH 19.1	LOT 407	GOSSET	AVENUE	BERM	100/150	7.3	uPVC SN16	1.2	447327.40	702851.28	2.1LB	1.6FB	N	Dec-20	$664	PIPE SIZE: 4.7m = 100mm; 2.6m = 150mm
21879-M-15-SW1	SWMH21.2	SWMH 19.1	LOT 408	GOSSET	AVENUE	BERM	100	6.6	uPVC SN16	1.2	447352.02	702861.93	10.7LB	1.3FB	N	Dec-20	$590	
21879-M-15-SW1	-	SWM24142	LOT 409	GOSSET	AVENUE	BERM	100/150	10.6	uPVC SN16	1.2	447342.41	702895.58	1.2RB	1.6FB	N	Dec-20	$919	PIPE SIZE: 5.0m = 100mm; 5.6m = 150mm
21879-M-15-SW1	-	SWM24142	LOT 410	GOSSET	AVENUE	BERM	100	3.4	uPVC SN16	1.2	447341.55	702897.53	1.0LB	1.5FB	N	Dec-20	$372	
21879-M-15-SW1	SWM24142	SWM24143	LOT 411	GOSSET	AVENUE	BERM	100/150	8.8	uPVC SN16	1.2	447333.73	702914.57	4.6RB	1.2FB	N	Dec-20	$747	PIPE SIZE: 8.1m = 100mm; 0.7m = 150mm
21879-M-15-SW1	SWM24142	SWM24143	LOT 412	GOSSET	AVENUE	BERM	100	6.1	uPVC SN16	1.2	447331.15	702919.57	1.1LB	1.5FB	N	Dec-20	$556	
21879-M-15-SW1	SWM24142	SWM24143	LOT 413	GOSSET	AVENUE	BERM	100	4.4	uPVC SN16	1.2	447321.64	702941.71	1.3RB	1.4FB	N	Dec-20	$440	
21879-M-15-SW1	SWM24142	SWM24143	LOT 414	GOSSET	AVENUE	BERM	100	4.6	uPVC SN16	1.2	447335.02	702950.16	2.7LB	1.1FB	N	Dec-20	$454	
21879-M-15-SW1	SWM24142	SWM24143	LOT 415	GOSSET	AVENUE	BERM	100	7.1	uPVC SN16	1.2	447344.46	702929.16	0.7RB	1.6FB	N	Dec-20	$624	
21879-M-15-SW1	SWM24142	SWM24143	LOT 416	GOSSET	AVENUE	BERM	100/150	11.5	uPVC SN16	1.2	447345.70	702923.35	5.0LB	0.3FB	N	Dec-20	$958	PIPE SIZE: 8.2m = 100mm; 3.3m = 150mm
21879-M-15-SW1	-	SWM24143	LOT 417	GOSSET	AVENUE	BERM	100	4.2	uPVC SN16	1.2	447355.25	702906.17	1.4RB	1.5FB	N	Dec-20	$426	
21879-M-15-SW1	-	SWM24143	LOT 418	GOSSET	AVENUE	BERM	100/150	10.9	uPVC SN16	1.2	447355.49	702903.74	0.9LB	0.7FB	N	Dec-20	$953	PIPE SIZE: 4.0m = 100mm; 6.9m = 150mm
21879-M-15-SW1	-	SWMH 21.2	LOT 419	COULDSACK	AVENUE	BERM	100	8.8	uPVC SN16	1.2	447375.61	702873.91	14.6RB	1.6FB	N	Dec-20	$740	
21879-M-15-SW1	SWMH 21.1	SWMH 21.2	LOT 420	COULDSACK	AVENUE	BERM	100/150	7.4	uPVC SN16	1.2	447402.01	702888.29	1.7RB	1.2FB	N	Dec-20	$681	PIPE SIZE: 3.8m = 100mm; 3.6m = 150mm
21879-M-15-SW1	SWMH 21.1	SWMH 21.2	LOT 421	COULDSACK	AVENUE	BERM	100	4.3	uPVC SN16	1.2	447405.24	702889.13	1.5LB	0.4FB	N	Dec-20	$433	
21879-M-15-SW1	SWMH SP 4.2	SWM25005	LOT 422	COULDSACK	AVENUE	BERM	100	4.9	uPVC SN16	1.2	447399.78	702931.57	1.9RB	1.9FB	N	Dec-20	$474	
21879-M-15-SW1	SWMH SP 4.2	SWM25005	LOT 423	COULDSACK	AVENUE	BERM	100/150	13.8	uPVC SN16	1.2	447399.10	702934.19	0.8LB	1.2FB	N	Dec-20	$1,183	PIPE SIZE: 3.7m = 100mm; 10.1m = 150mm
21879-M-15-SW1	SWM25005	SWM25006	LOT 424	COULDSACK	AVENUE	BERM	100	13.4	uPVC SN16	1.2	447393.17	702945.59	1.1LB	1.3FB	N	Dec-20	$1,054	
21879-M-15-SW1	SWM25005	SWM25006	LOT 425	COULDSACK	AVENUE	BERM	100	4.8	uPVC SN16	1.2	447383.99	702966.52	1.8RB	0.6FB	N	Dec-20	$467	
21879-M-15-SW1	-	SWMH 21.1	LOT 426	COULDSACK	AVENUE	BERM	100/150	10.2	uPVC SN16	1.2	447423.37	702883.83	1.5RB	0.8FB	N	Dec-20	$901	PIPE SIZE: 3.7m = 100mm; 6.5m = 150mm
21879-M-15-SW1	-	SWMH 21.1	LOT 427	COULDSACK	AVENUE	BERM	100	3.4	uPVC SN16	1.2	447421.80	702881.95	0.8LB	1.5FB	N	Dec-20	$372	
21879-M-15-SW1	SWMH 21.1	SWMH 21.2	LOT 428	COULDSACK	AVENUE	BERM	100	7.8	uPVC SN16	1.2	447408.89	702874.74	1.5LB	0.9FB	N	Dec-20	$672	
21879-M-15-SW1	SWMH 21.1	SWMH 21.2	LOT 429	COULDSACK	AVENUE	BERM	100/150	8.2	uPVC SN16	1.2	447388.20	702862.29	1.3RB	1.5FB	N	Dec-20	$736	PIPE SIZE: 4.5m = 100mm; 3.7m = 150mm
21879-M-15-SW1	SWMH 21.1	SWMH 21.2	LOT 430	COULDSACK	AVENUE	BERM	100	5.2	uPVC SN16	1.2	447385.03	702861.09	2.0LB	1.1FB	N	Dec-20	$495	
21879-M-15-SW1	SWMH 21.2	SWMH 19.1	LOT 431	GOSSET	AVENUE	BERM	100	5.5	uPVC SN16	1.2	447364.42	702850.67	2.2RB	1.2FB	N	Dec-20	$515	
21879-M-15-SW1	SWMH 21.2	SWMH 19.1	LOT 432	GOSSET	AVENUE	BERM	100/150	9.8	uPVC SN16	1.2	447361.53	702848.27	1.4LB	2.1FB	N	Dec-20	$860	PIPE SIZE: 4.7m = 100mm; 5.1m = 150mm
21879-M-15-SW1	SWMH 21.2	SWMH 19.1	LOT 433	GOSSET	AVENUE	BERM	100/150	10.5	uPVC SN16	1.2	447340.61	702839.62	2.2RB	1.3FB	N	Dec-20	$916	PIPE SIZE: 4.6m = 100mm; 5.9m = 150mm

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

STORMWATER CATCHPITS

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** Apr-21

Stage: Stage 15

Plan ID	Catchpit ID	Property ID (Lot No. or Address)	Street Name	Street Type	Catchpit Type	Grate Level (m)	Easting Coordinate	Northing Coordinate	Service Status	Install Date	Asset Value	Comments
21879-M-15-SW1	CP SP 22	LOT 423	COULDSACK	AVENUE	SINGLE SUMP	39.59	447403.03	702942.99	N	Dec-20	$2,071	
21879-M-15-SW1	CP 101	LOT 410	GOSSET	AVENUE	SINGLE SUMP	39.16	447343.46	702903.68	N	Dec-20	$2,071	
21879-M-15-SW1	CP 109	LOT 430	COULDSACK	AVENUE	SINGLE SUMP	39.46	447378.87	702862.41	N	Dec-20	$2,071	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

STORMWATER CATCHPIT LEADS

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors
Development/Subdivision/Job: Greenhill Park
Stage: Stage 15
Prepared by: S & L
Date: Apr-21

Plan ID	Catchpit ID	Dwnstr MH/ Asset ID	Property ID (Lot No. or Address)	Street Name	Street Type	Physical Location (where necessary)	Catchpit Lead Pipe Diam (mm)	Catchpit Lead Pipe Length (m)	Catchpit Lead Pipe Material	Invert Level at Dwnstrm end	Service Status	Install Date	Asset Value	Comments
21879-M-15-SW1	CP SP 22	SWM25005	LOT 423	COULDSACK	AVENUE	ROADWAY	225	5.9	uPVC SN16	38.47	N	Dec-20	$1,372	
21879-M-15-SW1	CP 101	SWM24142	LOT 410	GOSSET	AVENUE	ROADWAY	225	1.9	uPVC SN17	37.82	N	Dec-20	$442	
21879-M-15-SW1	CP 109	SWMH 21.2	LOT 430	COULDSACK	AVENUE	ROADWAY	225	3.5	uPVC SN17	38.23	N	Dec-20	$814	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

STORMWATER SUBSOIL DRAIN

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors
Development/Subdivision/Job: Greenhill Park
Stage: Stage 15
Prepared by: S & L
Date: Apr-21

Plan ID	Dwnstr Asset ID	Street Name	Street Type	Physical Location (where necessary)	Pipe Diameter (mm)	Pipe Length (m)	Pipe Material	Invert Level Upstr (m)	Invert Level Dwnstr (m)	Easting Coordinate Inlet	Northing Coordinate Inlet	Easting Coordinate Outlet	Northing Coordinate Outlet	Service Status	Install Date	Asset Value	Comments
21879-M-15-SW1	CP 101	GOSSET	AVENUE	BERM	100	91.6	NOVA	39.02	38.41					N	Dec-20	$4,677	
21879-M-15-SW1	CP 102	GOSSET	AVENUE	BERM	100	35.1	NOVA	38.42	38.06					N	Dec-20	$1,792	EXISTING CATCHPIT
21879-M-15-SW1	CP 103	GOSSET	AVENUE	BERM	100	36.7	NOVA	38.60	37.75					N	Dec-20	$1,874	EXISTING CATCHPIT
21879-M-15-SW1	CP 109	COULDSACK	AVENUE	BERM	100	125.8	NOVA	39.36	38.71					N	Dec-20	$6,423	
21879-M-15-SW1	CP SP 22	COULDSACK	AVENUE	BERM	100	112.4	NOVA	39.36	38.84					N	Dec-20	$5,739	
21879-M-15-SW1	CP SP 23	COULDSACK	AVENUE	BERM	100	27.2	NOVA	38.86	38.43					N	Dec-20	$1,389	EXISTING CATCHPIT
21879-M-15-SW1	CP SP 24	COULDSACK	AVENUE	BERM	100	27.7	NOVA	39.00	38.12					N	Dec-20	$1,414	EXISTING CATCHPIT
21879-M-15-SW1	DCP 111	GOSSET	AVENUE	BERM	100	78.7	NOVA	38.92	38.26					N	Dec-20	$4,018	FUTURE CATCHPIT

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

WASTEWATER MANHOLES

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** Apr-21

Stage: Stage 15

(North Rim) (Centre) (Centre)

Plan ID	Manhole ID	Property ID (Lot No. or Address)	Street Name	Street Type	Lid Level (m)	Invert Level (m)	MH Width/Diam (mm)	Easting Coordinate	Northing Coordinate	Service Status	Install Date	Asset Value	Comments
21879-M-15-WW1	WWMH 18.2	LOT 707	N/A	N/A	TBC	35.43	1050	447305.55	702830.11	E	Nov-20	N/A	EXISTING MH FROM STAGE 13 (S&L Ref WWMH 18.2) LID LEVEL TO BE PROVIDED IN STAGE 14 AREA M. INVERT LEVEL AMENDED FROM STAGE 13 AREA M.
21879-M-15-WW1	WWMH 20.1	LOT 415	GOSSETT	AVENUE	39.12	37.51	1050	447334.98	702932.06	N	Nov-20	$2,448	
21879-M-15-WW1	WWMH 20.2	LOT 431	GOSSETT	AVENUE	39.52	36.47	1050	447369.03	702858.69	N	Nov-20	$4,081	
21879-M-15-WW1	WWMH 21.1	LOT 424	COULDSACK	AVENUE	39.56	38.11	1050	447392.66	702956.41	N	Nov-20	$1,903	
21879-M-15-WW1	WWMH 21.2	LOT 426	COULDSACK	AVENUE	39.96	37.21	1050	447426.75	702893.25	N	Nov-20	$4,081	
21879-M-15-WW1	WWMH 21.3	LOT 428	COULDSACK	AVENUE	39.78	36.98	1050	447404.72	702878.29	N	Nov-20	$4,081	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

WASTEWATER PIPELINES

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors
Development/Subdivision/Job: Greenhill Park
Stage: Stage 15
Prepared by: S & L
Date: Apr-21

Plan ID	Upstr MH/ Asset ID	Dwnstr MH/ Asset ID	Street Name	Street Type	Physical Location (where necessary)	Pipe Diameter (mm)	Pipe Length (m)	Pipe Material	Joint Type	Invert Level Upstr (m)	Invert Level Dwnstr (m)	Service Status	Install Date	Asset Value	Comments
21879-M-15-WW1	WWMH 20.2	WWMH 18.2	GOSSET	AVENUE	ROADWAY	150	69.6	uPVC SN16	RR	36.47	35.50	N	Nov-20	$9,248	
21879-M-15-WW1	WWMH 20.1	WWMH 20.2	GOSSET	AVENUE	ROADWAY	150	80.9	uPVC SN16	RR	37.51	36.52	N	Nov-20	$15,331	
21879-M-15-WW1	WWMH 21.3	WWMH 20.2	COULDSACK	AVENUE	ROADWAY	150	40.7	uPVC SN16	RR	36.98	36.50	N	Nov-20	$10,052	
21879-M-15-WW1	WWMH 21.2	WWMH 21.3	COULDSACK	AVENUE	ROADWAY	150	26.6	uPVC SN16	RR	37.21	37.02	N	Nov-20	$6,484	
21879-M-15-WW1	WWMH 21.1	WWMH 21.2	COULDSACK	AVENUE	ROADWAY	150	71.8	uPVC SN16	RR	38.11	37.23	N	Nov-20	$13,897	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

WASTEWATER CONNECTION/SERVICE LINE

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors
Development/Subdivision/Job: Greenhill Park
Stage: Stage 15

Prepared by: S & L
Date: Apr-21

Plan ID	Upstr MH/ Asset ID	Dwnstr MH/ Asset ID	Property ID (Lot No. or Address)	Street Name	Street Type	Physical Location (where necessary)	Service Pipe Diam (mm)	Service Pipe Length (m)	Service Pipe Material	Invert Level At Private End (m) OR Depth (m)	Easting Coordinate	Northing Coordinate	Distance from left (LB) or right (RB) boundary (m)	Distance from front (FB) or back (BB) boundary (m)	Service Status	Install Date	Asset Value	Comments
21879-M-15-WW1	WWMH 20.2	WWMH 18.2	LOT 407	GOSSET	AVENUE	BERM	100	9.6	uPVC SN16	1.2	447341.41	702856.75	1.1RB	1.2FB	N	Nov-20	$648	
21879-M-15-WW1	WWMH 20.2	WWMH 18.2	LOT 408	GOSSET	AVENUE	BERM	100	4.9	uPVC SN16	1.2	447344.46	702858.28	2.3LB	1.3FB	N	Nov-20	$333	
21879-M-15-WW1	WWMH 20.1	WWMH 20.2	LOT 409	GOSSET	AVENUE	BERM	100	7.6	uPVC SN16	1.2	447347.63	702886.65	0.6LB	0.9FB	N	Nov-20	$513	
21879-M-15-WW1	WWMH 20.1	WWMH 20.2	LOT 410	GOSSET	AVENUE	BERM	100	5.8	uPVC SN16	1.2	447338.13	702906.10	1.8RB	0.8FB	N	Nov-20	$392	
21879-M-15-WW1	WWMH 20.1	WWMH 20.2	LOT 411	GOSSET	AVENUE	BERM	100	8.3	uPVC SN16	1.2	447336.62	702908.93	1.4LB	0.9FB	N	Nov-20	$560	
21879-M-15-WW1	-	WWMH 20.1	LOT 412	GOSSET	AVENUE	BERM	100	5.6	uPVC SN16	1.2	447326.50	702929.81	0.6RB	1.6FB	N	Nov-20	$378	
21879-M-15-WW1	-	WWMH 20.1	LOT 413	GOSSET	AVENUE	BERM	100	8.8	uPVC SN16	1.2	447326.18	702932.67	2.2LB	0.8FB	N	Nov-20	$594	
21879-M-15-WW1	-	WWMH 20.1	LOT 414	GOSSET	AVENUE	BERM	100	10.3	uPVC SN16	1.2	447338.25	702941.83	1.5RB	0.9FB	N	Nov-20	$695	
21879-M-15-WW1	-	WWMH 20.1	LOT 415	GOSSET	AVENUE	BERM	100	2.6	uPVC SN16	1.2	447339.61	702940.33	0.4LB	1.6FB	N	Nov-20	$176	
21879-M-15-WW1	WWMH 20.1	WWMH 20.2	LOT 416	GOSSET	AVENUE	BERM	100	7.1	uPVC SN16	1.2	447349.10	702917.45	1.4RB	0.9FB	N	Nov-20	$479	
21879-M-15-WW1	WWMH 20.1	WWMH 20.2	LOT 417	GOSSET	AVENUE	BERM	100	3.3	uPVC SN16	1.2	447350.20	702915.03	1.3LB	0.9FB	N	Nov-20	$223	
21879-M-15-WW1	WWMH 20.1	WWMH 20.2	LOT 418	GOSSET	AVENUE	BERM	100	7.4	uPVC SN16	1.2	447360.19	702894.69	1.1RB	0.9FB	N	Nov-20	$500	
21879-M-15-WW1	WWMH 21.3	WWMH 20.2	LOT 419	COULDSACK	AVENUE	BERM	100	9.7	uPVC SN16	1.2	447387.99	702880.10	0.8RB	1.1FB	N	Nov-20	$655	
21879-M-15-WW1	WWMH 21.3	WWMH 20.2	LOT 420	COULDSACK	AVENUE	BERM	100	3.8	uPVC SN16	1.2	447390.28	702881.63	2.0LB	1.3FB	N	Nov-20	$257	
21879-M-15-WW1	WWMH 21.1	WWMH 21.2	LOT 421	COULDSACK	AVENUE	BERM	100	3.6	uPVC SN16	1.2	447408.16	702918.27	1.8RB	1.0FB	N	Nov-20	$243	
21879-M-15-WW1	WWMH 21.1	WWMH 21.2	LOT 422	COULDSACK	AVENUE	BERM	100	5.6	uPVC SN16	1.2	447406.09	702919.76	0.5LB	2.1FB	N	Nov-20	$378	
21879-M-15-WW1	WWMH 21.1	WWMH 21.2	LOT 423	COULDSACK	AVENUE	BERM	100	4.7	uPVC SN16	1.2	447394.03	702944.03	0.7RB	1.2FB	N	Nov-20	$317	
21879-M-15-WW1	-	WWMH 21.1	LOT 424	COULDSACK	AVENUE	BERM	100	4.1	uPVC SN16	1.2	447387.45	702954.84	1.0RB	2.3FB	N	Nov-20	$277	
21879-M-15-WW1	-	WWMH 21.2	LOT 425	COULDSACK	AVENUE	BERM	100	5.8	uPVC SN16	1.2	447387.15	702958.20	2.1LB	1.2FB	N	Nov-20	$392	
21879-M-15-WW1	-	WWMH 21.2	LOT 426	COULDSACK	AVENUE	BERM	100	8.3	uPVC SN16	1.2	447434.05	702889.37	1.2LB	2.1FB	N	Nov-20	$560	
21879-M-15-WW1	WWMH 21.2	WWMH 21.3	LOT 427	COULDSACK	AVENUE	BERM	100	5.3	uPVC SN16	1.2	447411.35	702876.40	1.5RB	0.7FB	N	Nov-20	$358	
21879-M-15-WW1	WWMH 21.3	WWMH 20.2	LOT 428	COULDSACK	AVENUE	BERM	100	4.4	uPVC SN16	1.2	447400.17	702869.25	1.7RB	1.4FB	N	Nov-20	$297	
21879-M-15-WW1	WWMH 21.3	WWMH 20.2	LOT 429	COULDSACK	AVENUE	BERM	100	5.6	uPVC SN16	1.2	447397.96	702868.22	0.7LB	1.2FB	N	Nov-20	$378	
21879-M-15-WW1	WWMH 21.3	WWMH 20.2	LOT 430	GOSSET	AVENUE	BERM	100	5.7	uPVC SN16	1.2	447375.60	702855.84	1.3RB	1.5FB	N	Nov-20	$385	
21879-M-15-WW1	WWMH 21.3	WWMH 20.2	LOT 431	GOSSET	AVENUE	BERM	100	4.6	uPVC SN16	1.2	447373.31	702854.42	1.4LB	1.8FB	N	Nov-20	$311	
21879-M-15-WW1	WWMH 20.2	WWMH 18.2	LOT 432	GOSSET	AVENUE	BERM	100	2.9	uPVC SN16	1.2	447352.58	702845.21	1.6RB	0.9FB	N	Nov-20	$196	
21879-M-15-WW1	WWMH 20.2	WWMH 18.2	LOT 433	GOSSET	AVENUE	BERM	100	6.0	uPVC SN16	1.2	447350.86	702844.00	0.4LB	1.2FB	N	Nov-20	$405	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

WATER HYDRANTS

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** Apr-21

Stage: Stage 15

Plan ID	Hydrant ID	Pipe ID	Property ID (Lot No. or Address)	Street Name	Street Type	Hydrant Size (mm)	Physical Location (where necessary)	Easting Coordinate	Northing Coordinate	Service Status	Install Date	Asset Value	Comments
21879-M-15-W1	FH1	RM3	LOT 407	GOSSET	AVENUE	150	FOOTPATH	447339.35	702853.15	N	Feb-21	$2,557	
21879-M-15-W1	FH2	RM6	LOT 426	COULDSACK	AVENUE	150	BERM	447428.83	702889.66	N	Feb-21	$2,557	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

WATER PIPELINES

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors

Development/Subdivision/Job: Greenhill Park

Stage: Stage 15

Prepared by: S & L

Date: Apr-21

Plan ID	Pipe ID	Pipe Diameter (mm)	Pipe Length (m)	Laying Depth (m)	Pipe Material	Joint Type	Service Status	Install Date	Asset Value	Comments
21879-M-15-W1	RM1	150	7.1	1.2	PVC-M PN12	RRJ	N	Jan-21	$362	
21879-M-15-W1	RM2	150	39.0	1.2	PVC-M PN12	RRJ	N	Jan-21	$1,989	
21879-M-15-W1	RM3	150	5.7	1.2	PVC-M PN12	RRJ	N	Jan-21	$291	
21879-M-15-W1	RM4	150	10.2	1.2	PVC-M PN12	RRJ	N	Jan-21	$520	
21879-M-15-W1	RM5	150	14.3	1.2	PVC-M PN12	RRJ	N	Jan-21	$729	
21879-M-15-W1	RM6	150	103.3	1.2	PVC-M PN12	RRJ	N	Jan-21	$5,268	
21879-M-15-W1	RM7	63	10.9	1.2	PE80 SDR11 PN12.5	RRJ	N	Jan-21	$240	
21879-M-15-W1	RM8	63	65.4	1.2	PE80 SDR11 PN12.5	RRJ	N	Jan-21	$1,439	
21879-M-15-W1	RM9	63	12.8	1.2	PE80 SDR11 PN12.5	RRJ	N	Jan-21	$282	
21879-M-15-W1	RM10	63	60.8	1.2	PE80 SDR11 PN12.5	RRJ	N	Jan-21	$1,338	
21879-M-15-W1	RM11	63	13.2	1.2	PE80 SDR11 PN12.5	RRJ	N	Jan-21	$290	
21879-M-15-W1	RM12	63	78.9	1.2	PE80 SDR11 PN12.5	RRJ	N	Jan-21	$1,736	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

WATER CONNECTION/SERVICE LINE

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors

Development/Subdivision/Job: Greenhill Park

Stage: Stage 15

Prepared by: S & L

Date: Apr-21

Plan ID	Pipe ID	Property ID (Lot No. or Address)	Street Name	Street Type	Physical Location (where necessary)	Service Pipe Diam (mm)	Service Pipe Length (m)	Service Pipe Material	Easting Coordinate	Northing Coordinate	Distance from left (LB) or right (RB) boundary (m)	Meter Installed (Y/N)	Service Status	Install Date	Asset Value	Comments
		LOT 407														TO BE PROVIDED WITH STAGE 14 ASBUILTS
21879-M-15-W1	RM1	LOT 408	GOSSET	AVENUE	BERM	25	0.5	MDPE	447349.87	702885.40	1.5RB	N	N	Mar-21	$705	
21879-M-15-W1	RM1	LOT 409	GOSSET	AVENUE	BERM	25	0.6	MDPE	447344.41	702896.28	1.3RB	N	N	Mar-21	$705	
21879-M-15-W1	RM1	LOT 410	GOSSET	AVENUE	BERM	25	0.7	MDPE	447339.00	702907.56	0.8RB	N	N	Mar-21	$705	
21879-M-15-W1	RM1	LOT 411	GOSSET	AVENUE	BERM	25	0.7	MDPE	447333.73	702918.72	0.8RB	N	N	Mar-21	$705	
21879-M-15-W1	RM1	LOT 412	GOSSET	AVENUE	BERM	25	2.6	MDPE	447329.62	702928.06	3.4RB	N	N	Mar-21	$705	
21879-M-15-W1	EX RM6	LOT 413	GOSSET	AVENUE	BERM	25	0.7	MDPE	447323.71	702942.02	1.8RB	N	N	Mar-21	$705	PIPE ID IS FROM STAGE 12 ASBUILTS
21879-M-15-W1	EX RM7	LOT 414	GOSSET	AVENUE	BERM	25	0.7	MDPE	447332.86	702950.82	1.2LB	N	N	Mar-21	$705	PIPE ID IS FROM STAGE 12 ASBUILTS
21879-M-15-W1	RM7	LOT 415	GOSSET	AVENUE	BERM	25	0.9	MDPE	447338.08	702938.67	1.3LB	N	N	Mar-21	$705	
21879-M-15-W1	RM8	LOT 416	GOSSET	AVENUE	BERM	25	0.9	MDPE	447343.07	702927.24	0.4LB	N	N	Mar-21	$705	
21879-M-15-W1	RM8	LOT 417	GOSSET	AVENUE	BERM	25	0.6	MDPE	447349.10	702914.29	1.4LB	N	N	Mar-21	$705	
21879-M-15-W1	RM8	LOT 418	GOSSET	AVENUE	BERM	25	0.6	MDPE	447354.61	702903.03	1.2LB	N	N	Mar-21	$705	
21879-M-15-W1	RM10	LOT 419	COULDSACK	AVENUE	BERM	25	0.6	MDPE	447376.84	702872.43	14.2RB	N	N	Mar-21	$705	
21879-M-15-W1	RM10	LOT 420	COULDSACK	AVENUE	BERM	25	0.6	MDPE	447390.92	702880.11	1.8LB	N	N	Mar-21	$705	
21879-M-15-W1	RM12	LOT 421	COULDSACK	AVENUE	BERM	25	0.7	MDPE	447418.43	702904.11	5.8LB	N	N	Mar-21	$705	
21879-M-15-W1	RM12	LOT 422	COULDSACK	AVENUE	BERM	25	0.4	MDPE	447401.52	702933.16	1.3RB	N	N	Mar-21	$705	
21879-M-15-W1	RM12	LOT 423	COULDSACK	AVENUE	BERM	25	0.4	MDPE	447395.58	702944.60	0.8RB	N	N	Mar-21	$705	
21879-M-15-W1	RM12	LOT 424	COULDSACK	AVENUE	BERM	25	0.5	MDPE	447389.75	702956.62	0.4RB	N	N	Mar-21	$705	
21879-M-15-W1	RM12	LOT 425	COULDSACK	AVENUE	BERM	25	0.6	MDPE	447385.18	702966.33	2.4RB	N	N	Mar-21	$705	
21879-M-15-W1	RM6	LOT 426	COULDSACK	AVENUE	BERM	25	0.3	MDPE	447431.83	702890.92	2.1LB	N	N	Mar-21	$705	
21879-M-15-W1	RM6	LOT 427	COULDSACK	AVENUE	BERM	25	1.3	MDPE	447411.25	702877.79	2.1RB	N	N	Mar-21	$705	
21879-M-15-W1	RM6	LOT 428	COULDSACK	AVENUE	BERM	25	0.9	MDPE	447398.96	702870.61	1.3RB	N	N	Mar-21	$705	
21879-M-15-W1	RM6	LOT 429	COULDSACK	AVENUE	BERM	25	1.8	MDPE	447389.07	702865.33	3.6RB	N	N	Mar-21	$705	
21879-M-15-W1	RM6	LOT 430	COULDSACK	AVENUE	BERM	25	0.9	MDPE	447375.37	702857.86	2.0RB	N	N	Mar-21	$705	
21879-M-15-W1	RM6	LOT 431	GOSSET	AVENUE	BERM	25	0.7	MDPE	447363.36	702851.93	1.8RB	N	N	Mar-21	$705	
21879-M-15-W1	RM6	LOT 432	GOSSET	AVENUE	BERM	25	0.7	MDPE	447352.62	702846.74	2.3RB	N	N	Mar-21	$705	
21879-M-15-W1	RM6	LOT 433	GOSSET	AVENUE	BERM	25	0.8	MDPE	447339.08	702840.85	1.3RB	N	N	Mar-21	$705	

As Built Datasheet (to accompany As Built Plans) **Waikato Regional ITS**

WATER VALVES

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors

Development/Subdivision/Job: Greenhill Park

Stage: Stage 15

Prepared by: S & L

Date: Apr-21

Plan ID	Valve ID	Pipe ID	Property ID (Lot No. or Address)	Street Name	Street Type	Valve Size (mm)	Valve Manufacturer	Easting Coordinate	Northing Coordinate	Service Status	Install Date	Asset Value	Comments
21879-M-15-W1	SV1	RM1	LOT 408	GOSSET	AVENUE	150	HAWLE	447354.83	702877.43	N	Jan-21	$2,200	
21879-M-15-W1	SV2	RM2	LOT 407	GOSSET	AVENUE	150	HAWLE	447340.42	702853.54	N	Jan-21	$2,200	
21879-M-15-W1	SV3	RM4	LOT 407	GOSSET	AVENUE	150	HAWLE	447336.45	702851.98	N	Jan-21	$2,200	
21879-M-15-W1	SV4	RM3	LOT 407	GOSSET	AVENUE	150	HAWLE	447338.01	702851.16	N	Jan-21	$2,200	
21879-M-15-W1	SV5	RM5	LOT 433	GOSSET	AVENUE	150	HAWLE	447342.33	702843.14	N	Jan-21	$2,200	
21879-M-15-W1	PV1	RM7	LOT 415	GOSSET	AVENUE	63	HAWLE	447337.51	702937.56	N	Jan-21	$930	
21879-M-15-W1	PV2	RM8	LOT 419	GOSSET	AVENUE	63	HAWLE	447366.52	702879.03	N	Jan-21	$930	
21879-M-15-W1	PV3	RM9	LOT 419	GOSSET	AVENUE	63	HAWLE	447367.22	702877.56	N	Jan-21	$930	
21879-M-15-W1	PV4	RM10	LOT 421	COULDSACK	AVENUE	63	HAWLE	447417.77	702895.71	N	Jan-21	$930	
21879-M-15-W1	PV5	RM12	LOT 421	COULDSACK	AVENUE	63	HAWLE	447419.22	702896.99	N	Jan-21	$930	
21879-M-15-W1	PV6	RM12	LOT 425	COULDSACK	AVENUE	63	HAWLE	447385.24	702967.04	N	Jan-21	$930	