S&L
Land Development
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GREENHILL PARK RESIDENTIAL SUBDIVISION

STAGE 14

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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REVISION	Issued for Application	**DATE**	9 May 2021

Quality Assurance Statement		
Task	**Responsibility**	**Signature/Approval**
Written by:	Barry Pearson Engineer	
Reviewed by:	Grant Cowels Client Principal	G. Cowels

Our Ref: 19-30378-01

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1.0 BACKGROUND

1.1 Introduction

This application relates to Greenhill Park Subdivision Stage 14 located alongside Webb Drive, south of Pardoa Boulevard.

Works included the following:

- Stage 14 subdivision roading (including Guillaume Street, Kibblewhite Road and Ogilvie 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 north side of Carrs Road, Stage 14 development works for 33 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 14, LT 561397. 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 14 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 14 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 14 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 14. Results of the Clegg hammer testing are included in Appendix 2(a).

A GPS survey was undertaken throughout Stage 14 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 (Kibblewhite Rd)	Range CIV 20 - 37 Mean CIV 27	Min Inferred CBR 28*
Road 34 CH 280 – 340 (Ogilvie Ave)	Range CIV 22 - 32 Mean CIV 28	Min Inferred CBR 34*
Road 36 CH 130 – 200 (Guillaume St)	Range CIV 19 - 34 Mean CIV 24	Min Inferred CBR 25*

*****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 (Kibblewhite Rd), Road 34 (Ogilvie Ave) and Road 36 (Guillaume St)	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).

The Target MDD for the TNZ 40 pavement is 2.18t/m3 as per Opus MDD report (project number: 2-68015.00, lab reference: HA 6290/1_VHMDD).

Results are summarised below:

Basecourse NDM Results Summary

Road 22 CH 160 – 260 (Kibblewhite Rd)	Min 96% of MDD (Target MDD 2.22t/m3)	Mean 98% of MDD
Road 34 CH 280 – 340 (Ogilvie Ave)	Min 100% of MDD (Target MDD 2.22t/m3)	Mean 101% of MDD
Road 36 CH 130 – 200 (Guillaume St)	Min 97% of MDD (Target MDD 2.18t/m3)	Mean 102% of MDD

3.5 Benkelman Beam Results

Benkelman beam tests were carried out by WSP 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	1.02	0.62	0	0.85
Road 34 CH 770 - 850	1.28	0.68	0	1.04
Road 36 CH 190 - 340	1.28	0.72	0	0.85

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 14 discharges into the Area M swales for treatment and conveyance:

- Swale 3A 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 14 discharges into swale 3A 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-14-R1 and 21879-M-14-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 14.

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

APPROVED
By Michael at 11:52 am, May 26, 2021

GREENHILL PARK RESIDENTIAL SUBDIVISION

STAGE 14
Area M, Greenhill Park

HAMILTON

REPORT ON SUBDIVISION EARTHWORKS AND RECOMMENDATIONS FOR BUILDING DEVELOPMENT

Our Ref: DB 171738-AREA-M-S14-01

V2 - Lot areas updated

Prepared for: Chedworth Properties Limited

Date: 26th May 2021

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21879-01-M14-EW1
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1.0 Subdivision Development Earthworks

1.1 Introduction

Stage 14 of Greenhill Park is currently accessed from Kibblewhite Road. Stage 14 comprises 33 residential lots (numbered 328 and 375 to 406). The locations of these lots are shown on attached *Cut/Fill Plan*, drawing 21879-01-M14-EW1 included in Appendix I.

Bulk earthworks have been completed to re- contour the previously agricultural landscape for Stage 14 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 375 to 406 and 328 for Area M Stage 14. 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 14 of the subdivision development were undertaken between December 2020 and May 2021

These earthworks comprised

1. The stripping of surface topsoil to expose underlying natural soils
2. The placement of filling within Lots 375 to 406 and 328. Although lot 402 had little to no fill placed and majority was cut.
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 100 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 SAND and sandy SILT, 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 5 blows per 100mm with a scala penetrometer in more 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 buried unsuitable soils, including some historical rubbish/debris. 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 lots where filling is less than 2.3m deep. Other lots will require further investigation and will require specific design. Specifically, any foundations on zones of fill over 2.3m deep should have site specific investigations taken below the base of the fill into the natural ground. Specific foundation design may entail either an engineered waffle slab or piled foundations embedded into the natural ground. These include Lots 328, 387, 392, 393, 399, 400.

1.5 Areas of Cut

Areas partly developed in cut are shown on 21879-01-M13-EW1 (Appendix I). Lots 384-385, 394, 328 and 401-406 had between 100mm–500mm of cut material. Only lot 402 is shown to be developed primarily in cut. 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 completion tests undertaken by DBCE is present in Appendix IV. The test positions are shown on 21879-01-M14-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 lot 402 is shown to be developed primarily in cut around 0.1m to 0.5m. Upon testing, there is a 300mm layer of fill observed. The natural ground under the filling comprised of 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 14 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 two relevant swales for Stage 14 are Swale 1D and 3A. A flood level of 36.40 to 38.00 mRL. has been used in assessing the flood risk in stage 14. This equates to minimum lot levels of 39.017 to 39.428 R.L. across the stage (with low being the west end and high being the east end). A list of Lot Levels for Stage 14 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 3A.

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 14 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. The backfill is typically silty sand and not considered expansive. Overall, Stage 14 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, where M Class foundations are recommended, this is to address 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 14 is influenced by swale 1, 1D and 3A. 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 14 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 14.

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 14 as shown for Lots: 375-406 and 328, DP543207 of Area M Stage 14 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: 14th May 2021

……

Aaron Kennedy

Civil Engineer

Report Reviewed By: Date: 26th May 2021

……

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-M14-EW1 Site
Levels Plan

Elevations Table			
NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOUR
1	-0.511	0.000	
2	0.000	0.500	
3	0.500	1.000	
4	1.000	1.500	
5	1.500	2.000	
6	2.000	2.500	
7	2.500	3.000	
8	3.000	3.500	
9	3.500	4.000	
10	4.000	4.416	

CUT

FILL

N

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

LEGEND

- DBCON GEOTECH TEST LOCATIONS
- 0.8 DEPTH OF FILL

CUT/FILL CONTOUR INTERVAL: 0.25M

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NP	SC	SC	05/21
AB	AS-BUILT	NP	SP	SP	05/21
AC	NEW SURFACE ADDED	NP	SC	BP	05/21

	NAME	DATE		NAME	DATE
SURVEYED	ONLINE	28/4/21	DESIGNED		

COORDINATE SYSTEM: NZGD 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES: ALP3 DP 534481
HEIGHT DATUM: MOTURIKI DATUM
ORIGIN OF HEIGHT: SS 507 SO 42451 RL = 44.04

TITLE

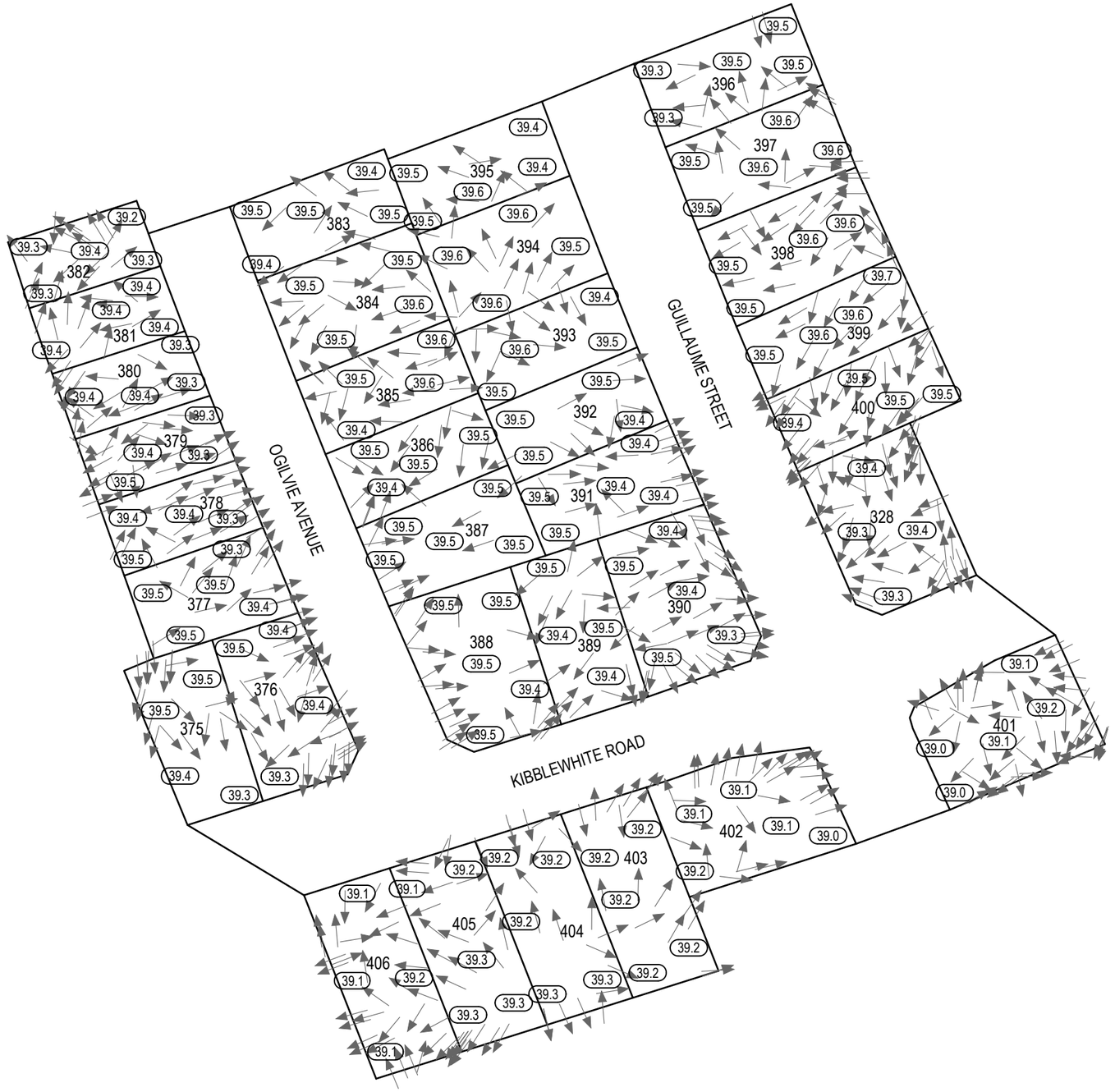
GREENHILL PARK STAGE 14 CUT / FILL PLAN

PREPARED FOR

Chedworth Properties Limited — GREENHILL PARK

ORIGINAL SCALES @ A3: 1:750 DO NOT SCALE DIMENSIONS
STATUS: AS-BUILT
DRAWING NO: 21879-01-M14-EW1
REVISION: AC

H:\0000 - H Drive\parkinson\Autocad\21879-01 - CADM - Stage 14 Cut Fill and Geotech Plans - Autocad\21879-01 - CADM - Stage 14 Cut Fill and Geotech Plans.dwg - Plotted: 17/05/2021



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

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

LEGEND

- FLOW ARROW
- (39.2) SPOT HEIGHT (GROUND LEVEL)

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NP	SC	SC	05/21
1	AS-BUILT	NP	SP	SP	05/21

	NAME	DATE		NAME	DATE
SURVEYED	ONLINE	28/4/21	DESIGNED		

COORDINATE SYSTEM: NZGD 2000 - MT EDEN CIRCUIT
ORIGIN OF COORDINATES: ALP3 DP 534481
HEIGHT DATUM: MOTURIKI DATUM
ORIGIN OF HEIGHT: SS 507 SO 42451 RL = 44.04

TITLE

SECTION LEVELS & FLOW GEOTECHNICAL REQUIREMENT STAGE 14 AREA M

PREPARED FOR

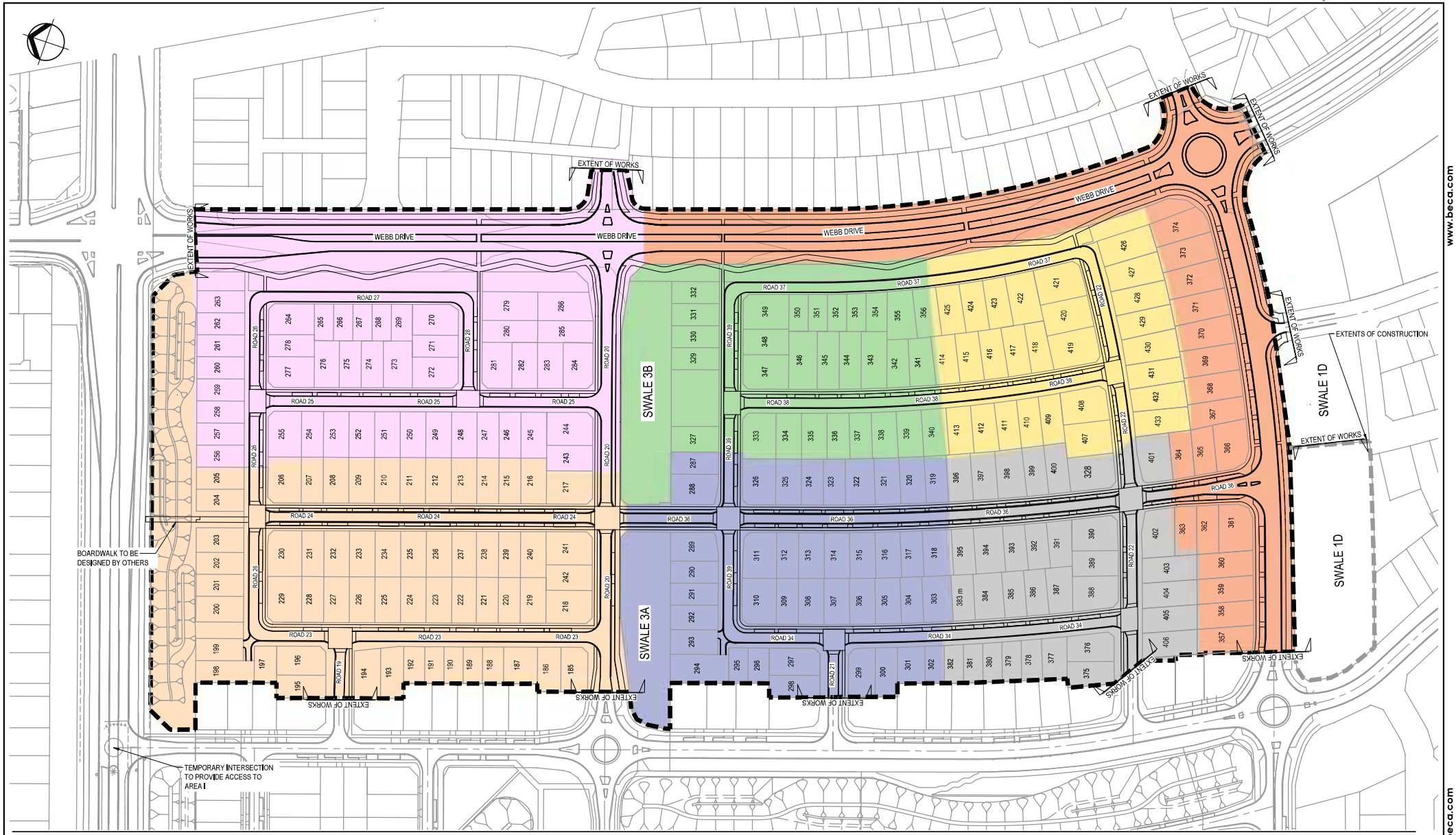
Chedworth Properties Limited
GREENHILL

ORIGINAL SCALES @ A3	STATUS
1:750 DO NOT SCALE DIMENSIONS	AS-BUILT

DRAWING NO	REVISION
21879-01-M14-G1	1

H:\0000 - H Drive\parkinson\Autocad\21879-01 - CADM - Stage 14 Cut Fill and Geotech Plans - Autocad\21879-01 - CADM - Stage 14 Cut Fill and Geotech Plans.dwg - Plotted: 17/05/2021

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
	Drawn	SM	17.08.18
Reduced Scale (A3) 1:2000	Dwg Verifier	GJC	17.08.18
	Dwg Check	GDC	17.08.18

Approved For Construction* AJ Date 21.09.18

* 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

DO NOT SCALE

IF IN DOUBT ASK.

Document No. 3411915-CA-2010.DWG

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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 14 **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 14 dated 14 May 2021 (reference 171738-AREA-M-S14-01)

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 375-406 and 328 are subject to the recommendations in the summary for individual lots and specific design as required to address variable ground. Engineered Waffle slabs or similar are expected as an appropriate foundation type for sites requiring specific design. Alternatively, piled foundations and timber floors may be required with piles embedded into natural ground below the fill soils.

ii. All lots are subject to an engineering inspection during foundation excavations unless further soils testing is carried out for building consent. Council requirements are for a minimum 4 soils tests per lots to be carried out for building consent. Specific lots have been identified as requiring further deeper investigations if buildings are located over fill greater than 2.0m deep, specifically Lots 328, 387, 392, 393, 399,400. Ground investigations should be taken into the natural ground below filling. Specific design by a suitably qualified engineer will then be required on the identified sites allowing for increased variability and performance between the compacted engineered fill and the natural ground, particularly at the transition between fill depths.

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: 26 May 2021**

Michael Richardson

Chartered Professional Engineer (Geotechnical)

CPEng 1005467

Summary of Geotechnical Data for Individual Lots

DP No:	TBC	Property Address	Greenhill Park, Stage 14, Hamilton	RC No:	11/2018/6632

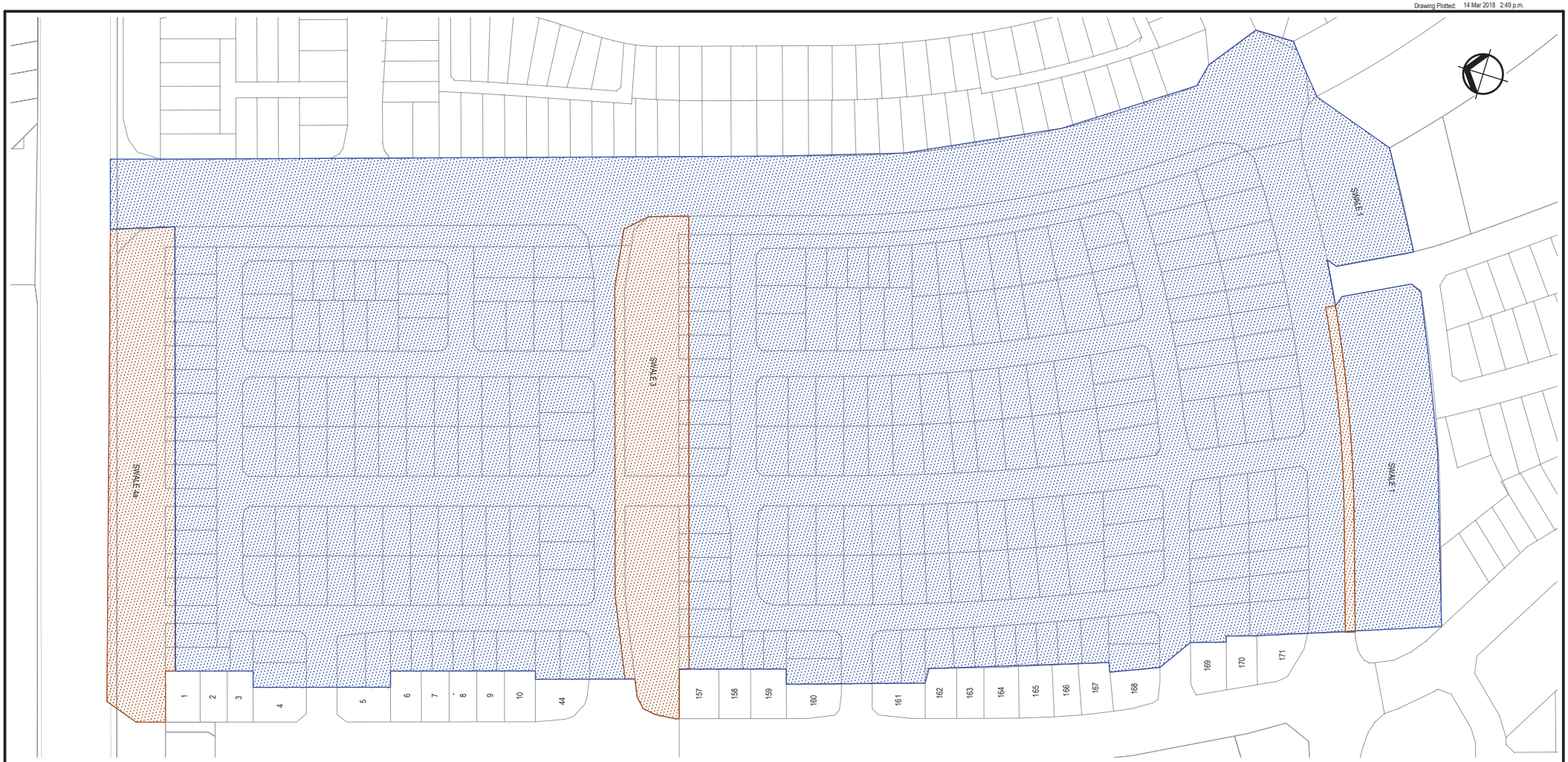
Lot No:	Area (m^2)	Subsurface Data						Foundations		Building Restriction Line	S/W Specific Design	S/W Soakage	S/W Reticulated	Designated Building Platform	Minimum Building Platform	Compressible Soils	On-site Effluent Disposal	Consent Notice	Comment
		Shear Strength (kPa)	Subdivision Filling		Natural 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/NA	Y/N/NA										
328	460	Note 1	Y	1.3-4.1[3]	N	Y	3000[3]	N	Y	N	Y	Y[4]	N	N	N	N	N	Y	
375	335	Note 1	Y	0.2-1.4[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
376	380	Note 1	Y	0.4-1.9[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
377	310	Note 1	Y	0.6-1.9[2]	N	Y	1100[3]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
378	248	Note 1	Y	0.7-1.7[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
379	228	Note 1	Y	0.9-2.0[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
380	224	Note 1	Y	0.1-2.1[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
381	222	Note 1	Y	0.2-2.2[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
382	218	Note 1	Y	0.9-2.1[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
383	300	Note 1	Y	0.0-1.1[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
384	400	Note 1	Y	0.1-1.2[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
385	300	Note 1	Y	0.0-1.2[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
386	300	Note 1	Y	0.1-2.0[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
387	345	Note 1	Y	0.9-3.4[3]	N	Y	1600[3]	N	Y	N	Y	Y[4]	N	N	N	N	N	Y	
388	450	Note 1	Y	0.8-1.5[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
389	349	Note 1	Y	0.8-1.9[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
390	450	Note 1	Y	0.3-1.9[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
391	320	Note 1	Y	0.1-2.0[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
392	300	Note 1	Y	0.4-3.1[3]	N	Y	2600[3]	N	Y	N	Y	Y[4]	N	N	N	N	N	Y	
393	305	Note 1	Y	0.3-3.1[3]	N	Y	2600[3]	N	Y	N	Y	Y[4]	N	N	N	N	N	Y	
394	400	Note 1	Y	0.4-1.6[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
395	305	Note 1	Y	0.0-1.2[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
396	340	Note 1	Y	0.7-0.9[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
397	349	Note 1	Y	0.8-1.7[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
398	400	Note 1	Y	0.2-1.9[2]	N	Y	1300[3]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
399	319	Note 1	Y	0.2-4.1[3]	N	Y	3000[3]	N	Y	N	Y	Y[4]	N	N	N	N	N	Y	

Summary of Geotechnical Data for Individual Lots

400	322	Note 1	Y	0.2-4.1[3]	N	Y	3000[3]	N	Y	N	Y	Y[4]	N	N	N	N	N	Y	
401	450	Note 1	Y	0.0-0.9[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
402	457	Note 1	Y	0.1-0.2[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
403	407	Note 1	Y	0.4-0.6[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
404	406	Note 1	Y	0.4-0.6[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
405	406	Note 1	Y	0.4-0.6[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	
406	407	Note 1	Y	0.0-0.6[2]	N	Y	200[2]	Y	N	N	Y	Y[4]	N	N	N	N	N	Y	

NOTES:
1) Testing undertaken with Shear vane and scala.
2) This considers approximately 200mm of topsoil removal across all lots prior to subdivision filling. Actual topsoil depths varied between 100-400mm.
3) Zones with greater than 2.3m filling have been subject to undercutting and removal of fill during earthworks. Backfilling of these zones have been carried out with engineered compacted fill. However, the increased variability of the underlying ground conditions will require specific design for any foundations spanning areas of fill greater than 2.3m deep.
4) Soakage testing required on individual lots based on the subdivision consent notice. Ground soakage and stormwater storage devices required.

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



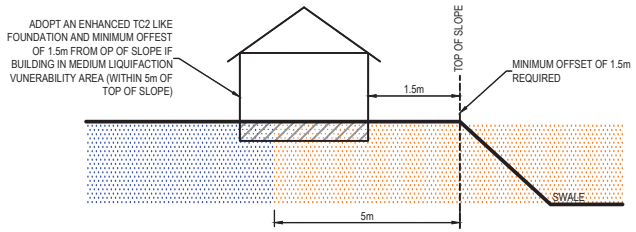
KEY

EXTENT OF AREA M

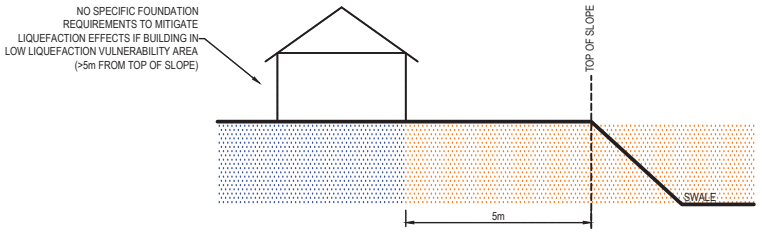
MEDIUM LIQUEFACTION VULNERABILITY
- MINOR TO MODERATE LIQUEFACTION-INDUCED GROUND DAMAGE IN 500 YEAR EARTHQUAKE
- TO MITIGATE LIQUEFACTION AND SEISMIC SLOPE INSTABILITY EFFECTS ADOPT LIQUEFACTION MITIGATION OPTION 1 OR 2.

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

IF IN DOUBT ASK

Appendix IV *Post-Construction Test Results*

Completion Testing by DCBE Ltd

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	1	Lot 375

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, respread topsoil, gravels	
200		3			
300		2		medium dense	
400		7		Engineered FILL, silt, sand, angular gravels	
500		5		brown, dry to moist	
600		5		200-500mm dominated by Sand, some silt, mixed browns	
700		7		minor fine gravels	
800		6			
900		4		500-1200mm dominated by Silt, some angular gravels	
1000		6		minor sand, mixed brown and creay brown	
1100		8			
1200		7		1200-1400mm silt, sand some gravels	
1300		11		minor topsoil	
1400		15			
1500		11		dense	
1600		9		Gravelly SAND, dark grey-brown, moist	
1700		7			
1800		8			
1900		5			
2000		5			
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

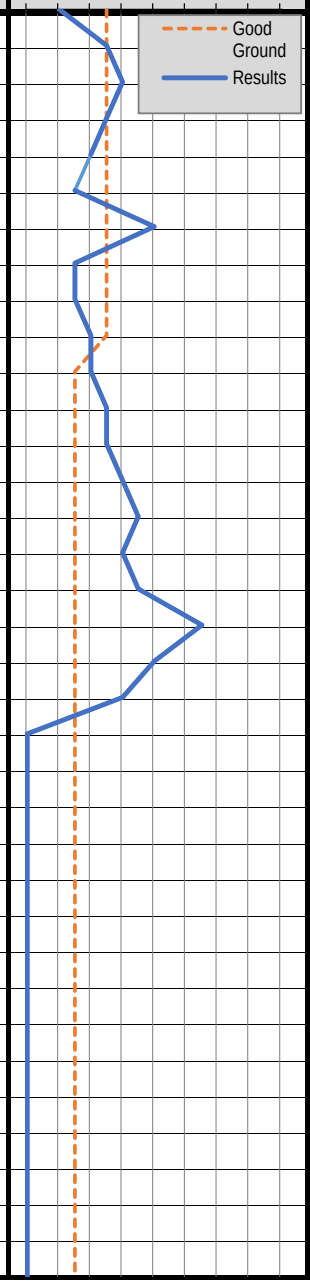
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1 Weather leading up to test was fine and cool, no recent significant rain
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	2	376

Depth (mm)	Undrained Shear (kPa)	1	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		2		FILL, respread topsoil, gravels	
200		5			
300		6		Engineered FILL, silt, sand, angular gravels minor pumiceous materials, brown, moist	
400		5			
500		4			
600		3			
700		8			
800		3		minor topsoil	
900		3		medium dense	
1000		4			
1100		4		Silty SAND, yellow-brown, minor orange mottling	
1200		5			
1300		5		minor silt, some gravels, grey-brown	
1400		6			
1500		7		dark brown	
1600		6		gravelly Sand, some pumice, minor silt, dark orange-brown	
1700		7			
1800		11			
1900		8			
2000		6			
2100				EOB @ 2.0m Target Depth	
2200					
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



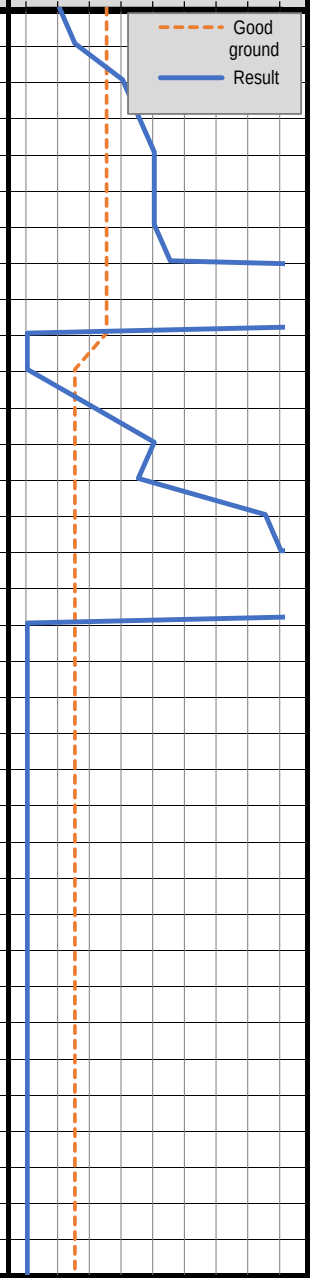
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was fine and cool, no recent significant rain
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	3	377



Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		2	FILL, respread topsoil, gravels	
200		3		
300		6	medium dense to very dense	
400		7		
500		8	Engineered FILL, sand, silt, angular gravels	
600		8	greys and browns, moist	
700		8		
800		9	interbedded Silt some sand and Sand, minor silt	
900		UTP		
1000			interspersed angular gravels and some interbedded layers	
1100				
1200		4		
1300		8		
1400		7		
1500		15		
1600		16	dense	
1700		UTP		
1800			SAND, minor silt, minor gravels, dark brown, moist	
1900			some gravels, dark brown and dark grey	
2000				
2100			EOB @ 2.0m	
2200			Target Depth	
2300				
2400				
2500				
2600				
2700				
2800				
2900				
3000				
3100				
3200				
3300				
3400				
3500				

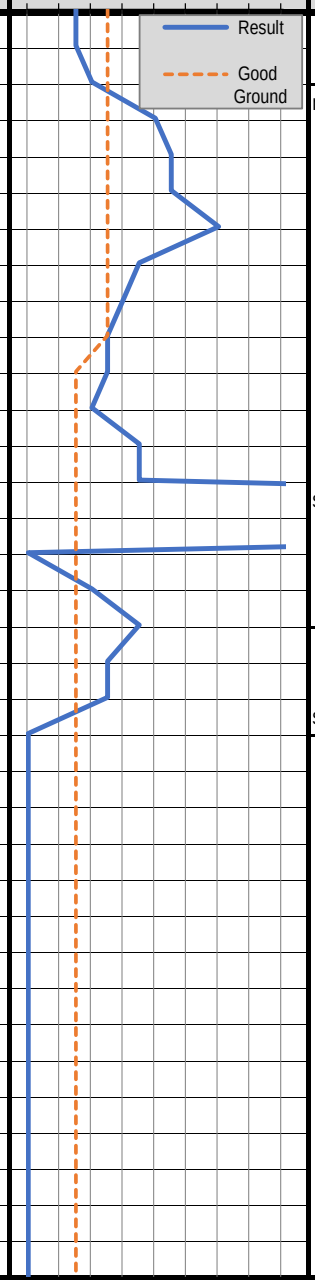
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was fine and cool, no recent significant rain
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	4	378

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, respread topsoil, gravels	
200		3			
300		4		medium dense	
400		8			
500		9		Engineered FILL, silt sand, angular gravels	
600		9		different fractions dominating at different levels	
700		12		mixed browns, dry to moist	
800		7			
900		6			
1000		5			
1100		5			
1200		4			
1300		7			
1400		7		significant gravels	
1500		UTP			
1600					
1700		4			
1800		7			
1900		5		Silty SAND, some pumiceous materials, grey-brown, moist	
2000		5		some gravels, dark brown	
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 fine and cool, no recent significant rain
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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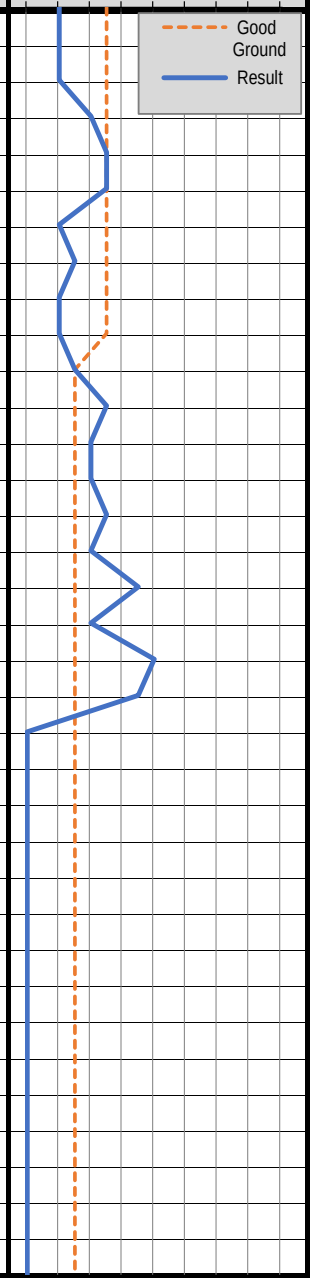
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	5	379

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, respread topsoil, gravels	
200		2			
300		2		Engineered FILL, silt, sand, angular gravels mixed browns and greys, moist loose to medium dense	
400		4			
500		5			
600		5			
700		2			
800		3			
900		2			
1000		2			
1100		3		interbedded Sand some silt, some gravels, grey-brown and Silt, minor sand, minor gravels, orange-brown	
1200		5			
1300		4			
1400		4			
1500		5			
1600		4			
1700		7			
1800		4			
1900		8			
2000		7			
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 fine and cool, no recent significant rain
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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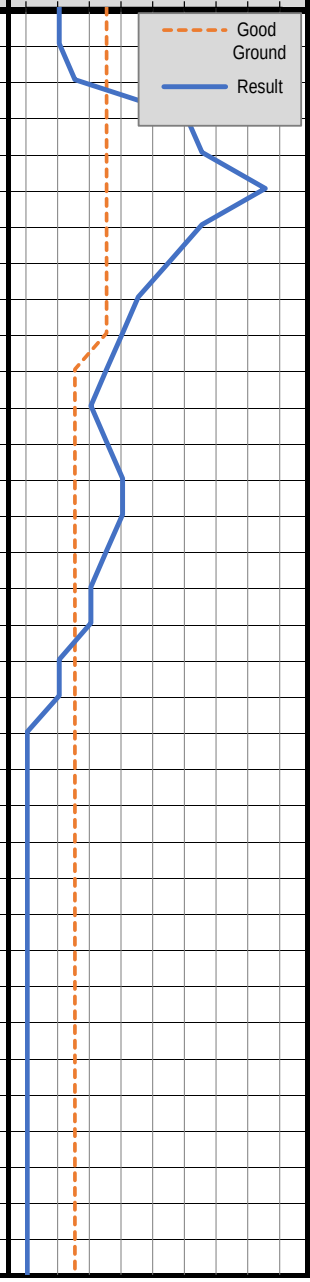
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	6	380a

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, respread topsoil, gravels	
200		2			
300		3			
400		10		dense	
500		11		Engineered FILL, silt, sand, minor angualr gravels	
600		15		mixed browns and greys, moist	
700		11		some angular gravels	
800		9			
900		7			
1000		6			
1100		5			
1200		4			
1300		5			
1400		6		some topsoil	
1500		6		medium dense	
1600		5			
1700		4			
1800		4			
1900		2			
2000		2			
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 fine and cool, no recent significant rain
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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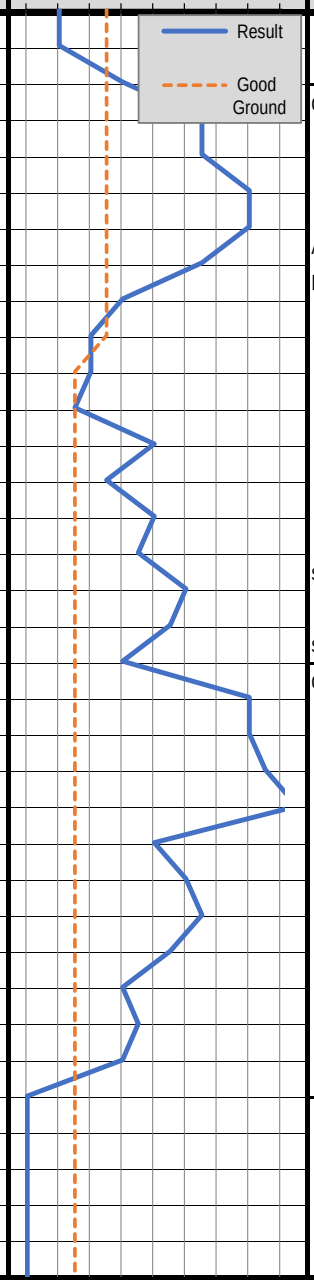
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	7	380b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		2	FILL, respread topsoil, gravels	
200		2		
300		6	dense	
400		11		
500		11	Engineered FILL, silt, sand, angular gravels	
600		14	mixed browns and greys, moist	
700		14	Angular gravels at 600mm	
800		11	Fill dominated by Silt	
900		6		
1000		4		
1100		4		
1200		3		
1300		8		
1400		5		
1500		8		
1600		7	significant angular graels	
1700		10		
1800		9	some topsoil	
1900		6	dense	
2000		14		
2100		14	Gravelly SAND, dark orange-brown, moist	
2200		15		
2300		17		
2400		8		
2500		10		
2600		11		
2700		9		
2800		6		
2900		7		
3000		6		
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 fine and cool, no recent significant rain		
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	8	Lot 381a

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, respread topsoil, gravels	
200		6			
300		6		dense	
400		4			
500		7		Engineered FILL, silt, sand, minor angular gravels	
600		9		creamy brown, moist	
700		8		700-1000mm, silt, minor sand, orange-brown	
800		7			
900		5			
1000		4		1000-1400mm Sand, silt, minor gravels, grey-brown	
1100		5			
1200		3			
1300		3		loose	
1400		3		some topsoil	
1500		4			
1600		3			
1700		2			
1800		3		SILT, minor fine sand, dark orange-brown	
1900		2		moist to very moist	
2000		1		creamy grey-brown, orange mottling, very moist	
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

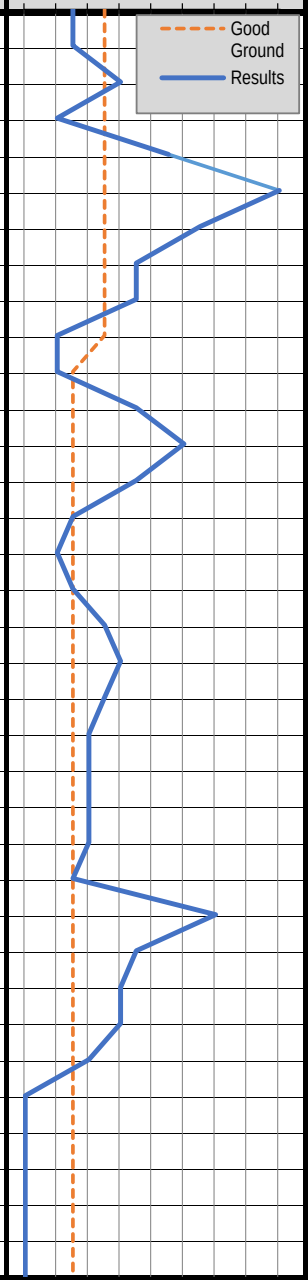
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1 Weather leading up to test was fine and cool with no significant recent rain (7 days plus)
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	9	Lot 381b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		3		FILL, respread topsoil angular gravels	
200		3			
300		6		Engineered FILL, sand, silt, angular gravels	
400		2		browns/greys, moist	
500		9		some topsoil, gravels	
600		16		dense	
700		11			
800		7		700-1100mm Silt, sand, few gravels	
900		7			
1000		2		firm	
1100		2			
1200		7		hard	
1300		10		grey-brown	
1400		7			
1500		3		Sands, some silt	
1600		2		loose to medium-dense	
1700		3		minor topsoil	
1800		5			
1900		6			
2000		5			
2100		4			
2200		4			
2300		4			
2400		4			
2500		3		dense	
2600		12		Gravelly SAND, silt, dark greys / browns, moist	
2700		7		minor silt	
2800		6			
2900		6			
3000		4		very moist	
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 fine and cool with no significant recent rain (7 days plus)		
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	10	Lot 382a

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		3			
300		4		Engineered FILL, silt, sand, interbedded gravels	
400		11		creamy brown and grey-brown, moist	
500		6			
600		12		dense to very dense	
700		13			
800		9		orange-brown and grey-brown	
900		6			
1000		13			
1100		9		dense	
1200		6			
1300		7			
1400		8			
1500		10		minor orange-mottling	
1600		12		some gravels	
1700		10		minor silt	
1800		7		some gravels	
1900		12			
2000		9			
2100		6			
2200		10		SILT, some sand, dark orange-brown, moist	
2300		8			
2400		7			
2500		7		Gravelly SAND, yellow-brown	
2600		9			
2700		12		heavy orange-mottling, moist	
2800		12			
2900		16		some pumiceous materials	
3000		UTP			
3100				EOB @ 3.0m	
3200				Target Depth	
3300					
3400					
3500					

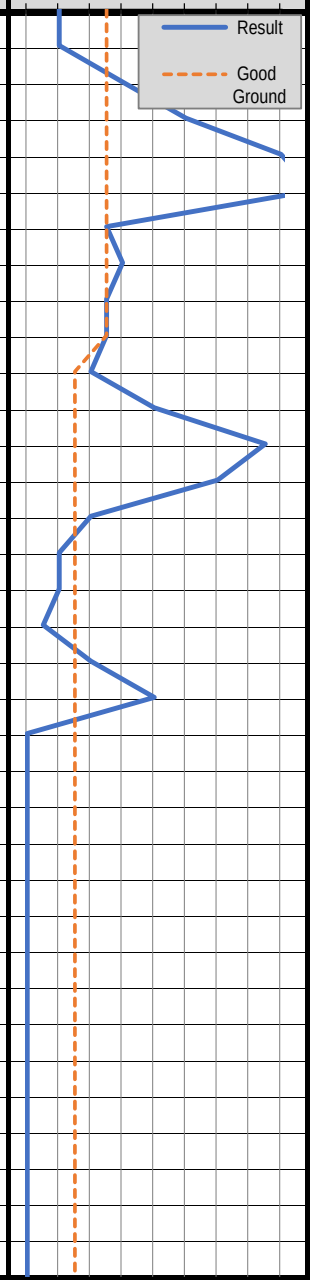
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was fine and cool with no significant recent rain (7 days plus)
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	11	Lot 382b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		2		FILL, respread topsoil gravels	
200		2			
300		6		dense	
400		10			
500		16		Engineer FILL, silt, sand, some angular gravels	
600		18		mixed brown and greys, moist	
700		5			
800		6		Fill dominated by Silt, orange-brown	
900		5			
1000		5			
1100		4			
1200		8		gravels, minor topsoil	
1300		15			
1400		12			
1500		4		stiff	
1600		2		SILT, minor sand, yellow-brown	
1700		2		heavy orange mottling, moist	
1800		1			
1900		4		Gravelly SAND, some silt, orange-brown, moist	
2000		8		minor silt, dark orange-brown	
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 fine and cool with no significant recent rain (7 days plus)
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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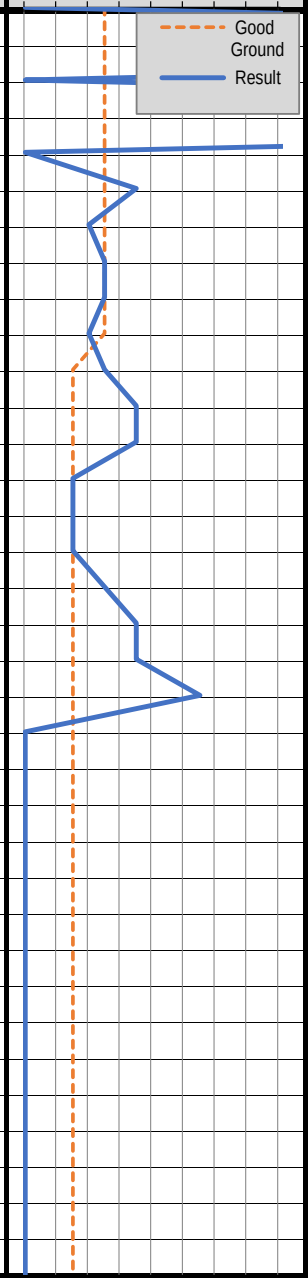
Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	12	Lot 383

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100					
200		UTP		FILL, respread topsoil gravels	
300				Area heavily trafficked, lots of gravels evident	
400		UTP			
500				medium dense	
600		7		some topsoil	
700		4		Engineer FILL, silt, sand, angular gravels	
800		5		browns and greys, moist	
900		5		some topsoil	
1000		4		medium-dense	
1100		5		Silty SAND, yellow-brown, minor orange mottling	
1200		7		moist	
1300		7			
1400		3		loose to dense	
1500		3		Gravelly SAND, dark-grey, moist	
1600		3		becoming minor pumiceous materials	
1700		5			
1800		7			
1900		7			
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 fine and cool with no significant recent rain (7 days plus)
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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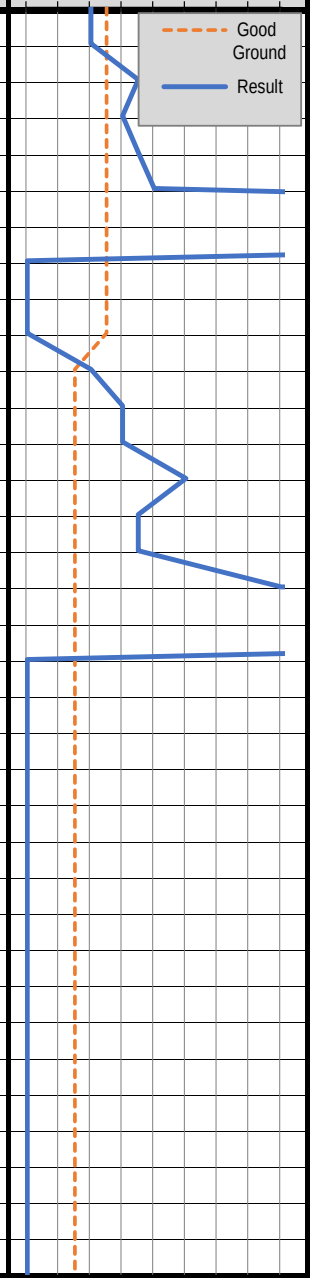
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	13	Lot 384

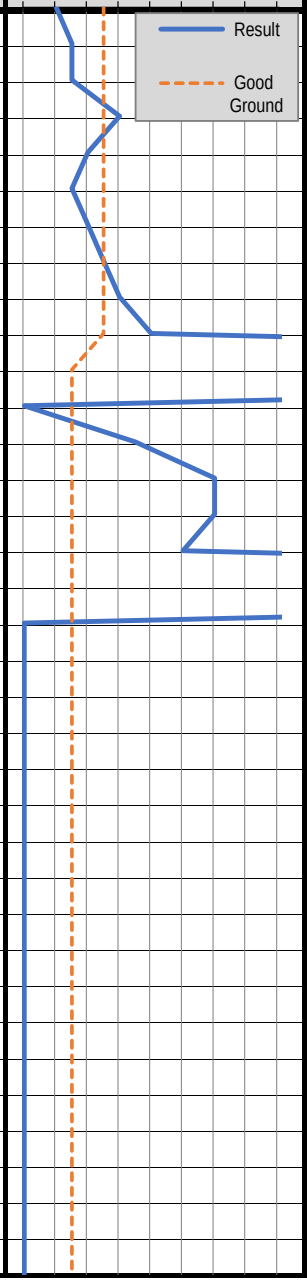
Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		4		FILL, respread topsoil, gravels	
200		4			
300		7			
400		6		medium dense	
500		7		some topsoil	
600		8		Engineered FILL, sand, silt, some angular gravels	
700		UTP		mix brown and grey, moist	
800					
900				500-1400mm Sand dominates, minor topsoil/gravels	
1000					
1100		4			
1200		6			
1300		6		dense	
1400		10		minor topsoil	
1500		7		dense to very dense	
1600		7		SAND, gravels, minor silt	
1700		16		dark orange-brown, moist	
1800		UTP			
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 fine and cool with no significant recent rain (7 days plus)		
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	14	Lot 385

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, respread topsoil, gravels	
200		3			
300		3			
400		6			
500		4		dense	
600		3		Engineered FILL, silt, sand, brown, moist	
700		4		minor topsoil	
800		5		400-700mm Sand dominates	
900		6			
1000		8		interbedded angular gravel	
1100		UTP			
1200				1100-1600mm silt, dominates, orange brown	
1300		7			
1400		12			
1500		12			
1600		10			
1700		UTP		very dense	
1800				SAND, gravels, dark brown, moist	
1900				some pumiceous materials	
2000				dark grey	
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 fine and cool with no significant recent rain (7 days plus)
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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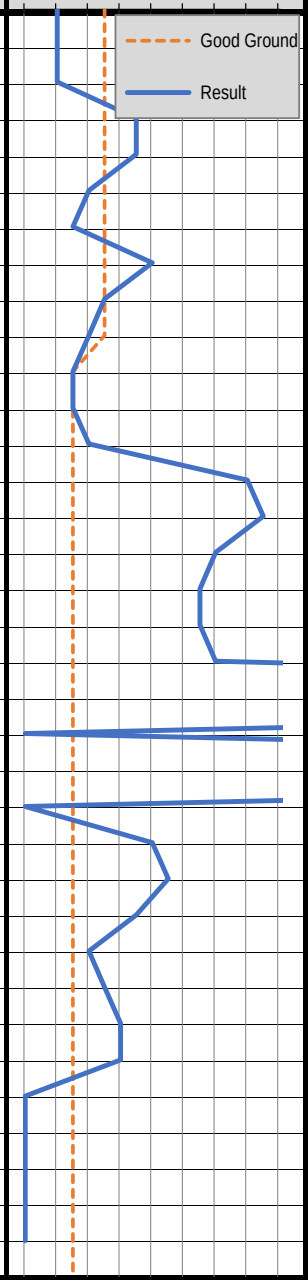
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	15	Lot 386a

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		2	FILL, respread topsoil, gravels	
200		2		
300		2		
400		7	dense	
500		7	Engineered FILL, sand, silt, creamy-brown, moist	
600		4	500-700mm sand, silt, angular gravels, orange-brown	
700		3		
800		8	700-1400mm silt, sand, minor gravels	
900		5		
1000		4	firm	
1100		3		
1200		3		
1300		4		
1400		14	some gravels, minor topsoil	
1500		15	very dense	
1600		12		
1700		11		
1800		11		
1900		12	sand, angular gravels, minor silt	
2000		UTP		
2100				
2200		UTP		
2300				
2400		8	dense	
2500		9	SAND, silt, yellow-brown, orange mottling, moist	
2600		7		
2700		4	minor silt	
2800		5		
2900		6	some gravels, brown	
3000		6		
3100			EOB @ 3.0m	
3200			Target Depth	
3300				
3400				
3500				



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

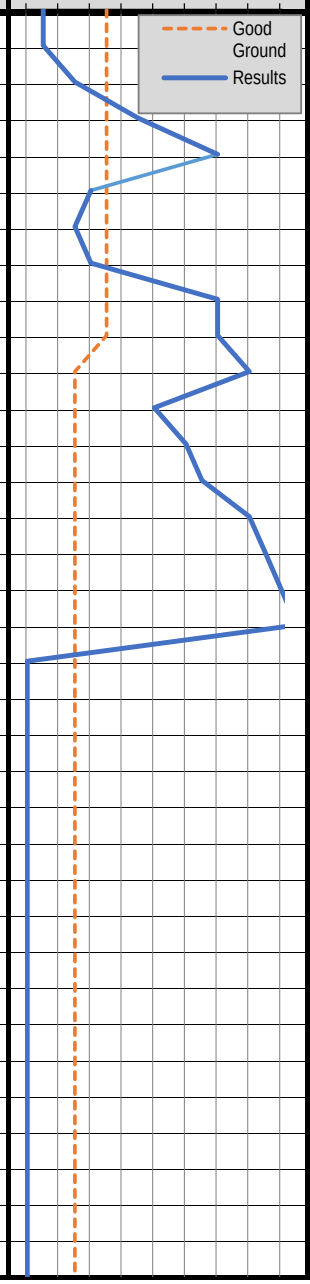
1. Weather leading up to test was fine and cool. No recent (10 days) rain.
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	16	Lot 386b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, respread topsoil, gravels	
200		1			
300		3			
400		7			
500		12		dense	
600		4		Engineered FILL, sand, silt, angular gravels	
700		3		interbedded in varying layers	
800		4		brown to orange-brown to grey, moist	
900		12			
1000		12			
1100		14			
1200		8			
1300		10			
1400		11			
1500		14			
1600		15		angular gravels to 2.0m	
1700		16		becoming very dense	
1800		17			
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

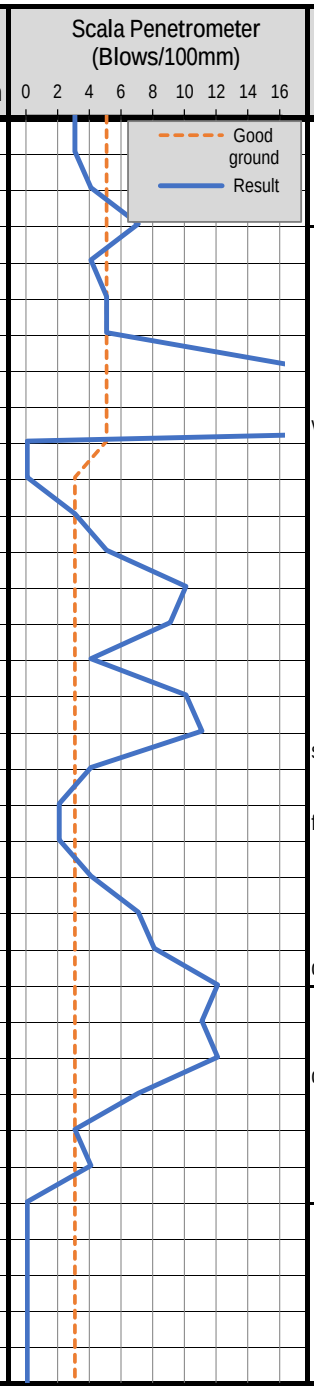
1. Weather leading up to test was fine and cool. No recent (10 days) rain.
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	17	Lot 387a

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		3	FILL, respread topsoil, gravels	
200		3		
300		4		
400		7	Engineered FILL, silt, sand, angular gravels interbedded in changing ratio's brown, orange-brown, grey, moist	
500		4		
600		5		
700		5		
800		18		
900		UTP	very dense	
1000				
1100				
1200		3		
1300		5		
1400		10		
1500		9		
1600		4		
1700		10		
1800		11	some topsoil, some angular gravels	
1900		4		
2000		2	fill dominated by Silt, firm to stiff	
2100		2		
2200		4		
2300		7		
2400		8	difficult to determine transition from Fill to natural ground	
2500		12	SAND, gravels, dark grey, moist	
2600		11		
2700		12	dense	
2800		7		
2900		3		
3000		4		
3100			EOB @3.0m Target Depth	
3200				
3300				
3400				
3500				



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

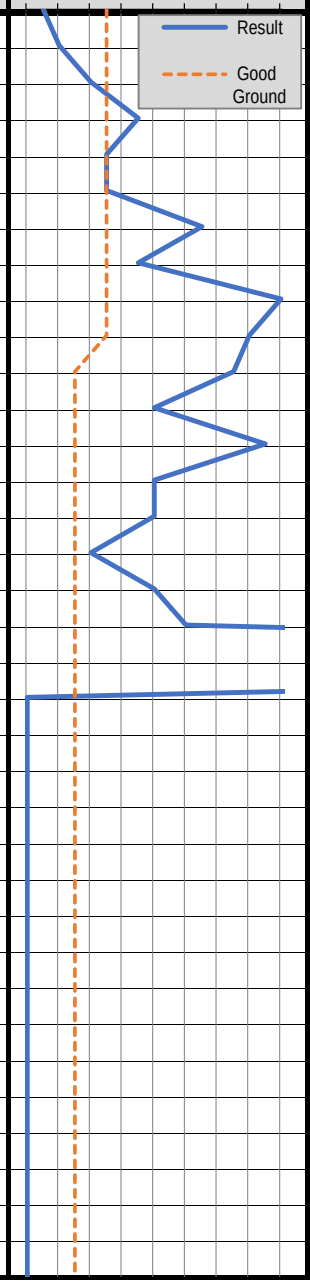
1. Weather leading up to test was fine and cool. No recent (10 days) rain.
2. Ground water was not encountered during testing
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

Rev2.8

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	18	Lot 387b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, respread topsoil, gravels	
200		2			
300		4			
400		7		dense	
500		5			
600		5		Engineered FILL, sand, silt, angular gravels	
700		11		mixed browns and greys	
800		7			
900		16		Silt dominates upper profile	
1000		14		Sands dominate lower profile	
1100		13		Angular gravels at varying densities with depth	
1200		8			
1300		15			
1400		8			
1500		8			
1600		4			
1700		8			
1800		10		significant angular gravels	
1900		UTP			
2000					
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					



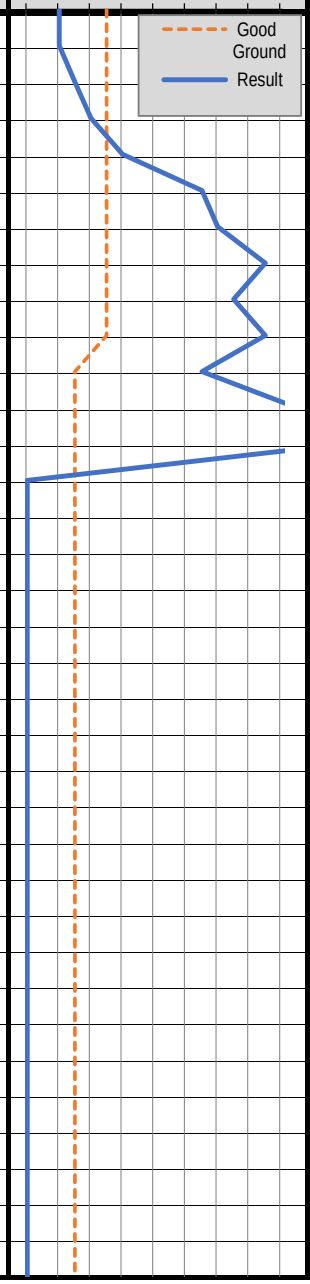
Notes:	EOB = End Of Borehole	UTP = Unable To Penetrate	UTE = Unable To Extract
1	Weather leading up to test was fine and cool. No recent (10 days) rain.		
2	Ground water was not encountered during testing		
3	Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained 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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	19	Lot 388

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		2		FILL, respread topsoil, gravels	
200		2			
300		3			
400		4		dense	
500		6			
600		11		Engineered FILL, sand, silt, angular gravels	
700		12		mixed browns and greys	
800		15			
900		13		Silt dominates upper profile	
1000		15		Sands dominate lower profile	
1100		11		Angular gravels at varying densities with depth	
1200		17		significant angular gravels	
1300		20			
1400					
1500					
1600					
1700				some pumecious materials	
1800					
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 fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	20	Lot 389a

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, respread topsoil, gravels	
200		3			
300		2			
400		10		very dense	
500		11		Engineered FILL, sand, silt, some angular gravels	
600		UTP		mixed brown, moist	
700					
800					
900		UTP			
1000				dense	
1100				Silty SAND, yellow-brown, moist	
1200		12		some fine pumiceous material, minor fine gravels	
1300		16		very dense	
1400		UTP		Gravelly SAND, some pumiceous material	
1500				minor silt, grey, moist	
1600					
1700					
1800					
1900					
2000					
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

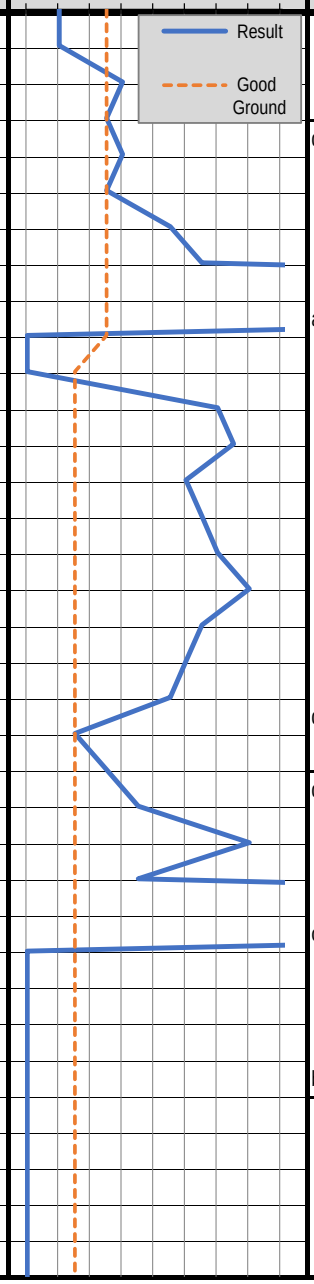
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1 Weather leading up to test was fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	21	Lot 389b

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		2		FILL, respread topsoil, gravels	
200		2			
300		6			
400		5		dense	
500		6			
600		5		Engineered FILL, sand, silt angular gravels	
700		9		varying proportions with depth	
800		11		mixed browns and greys, moist	
900		UTP		angular gravels significant	
1000					
1100					
1200		12			
1300		13			
1400		10			
1500		11			
1600		12			
1700		14			
1800		11			
1900		10			
2000		9		difficult to identify level of transition to natural ground	
2100		3			
2200		5		dense	
2300		7			
2400		14		Gravelly SAND, some pumiceous material	
2500		7		grey, moist	
2600		UTP		orange-brown	
2700					
2800					
2900					
3000				becoming wet	
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 fine and cool. No recent (10 days) rain.		
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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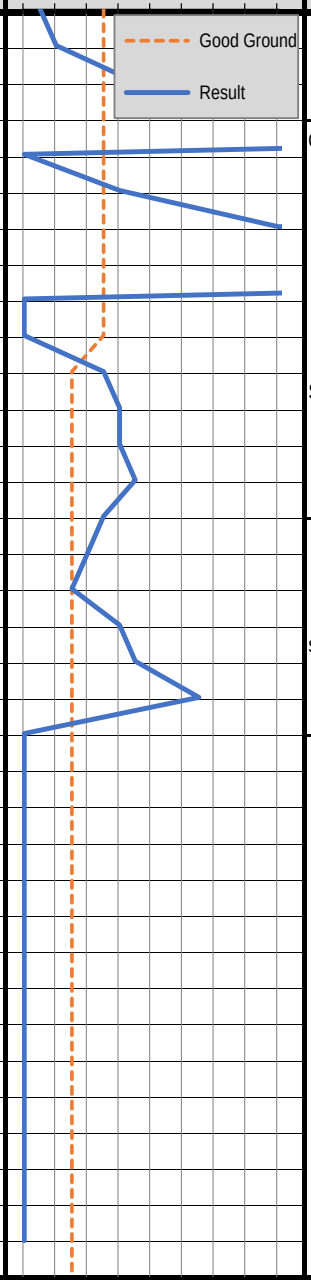
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	22	Lot 390a

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, respread topsoil, gravels	
200		2			
300		7			
400		UTP		dense	
500				Engineered FILL, silt, sand, angular gravels	
600		6		greys and browns, moist	
700		16			
800		UTP			
900					
1000					
1100		5		Silt dominates, hard, orange-brown	
1200		6			
1300		6			
1400		7			
1500		5		Silty SAND, orange-brown, moist	
1600		4			
1700		3			
1800		6		some gravels, hard	
1900		7			
2000		11		EOB @ 2.0m	
2100				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 fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	23	Lot 390b

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, respread topsoil, gravels	
200		2			
300		3			
400		5		dense	
500		7			
600		7		Engineered FILL, silt, sand, angular gravels	
700		7		greys and browns, moist	
800		5			
900		8			
1000		14			
1100		13		alternating domininance of Silt and Sand	
1200		11		Angular gravels at intermittant depths	
1300		15			
1400		8			
1500		6			
1600		5			
1700		4			
1800		6			
1900		5		minor topsoil, gravels	
2000		8			
2100		11			
2200		4			
2300		5			
2400		3		medium-dense	
2500		4			
2600		5		Silty SAND, orange-brown, moist	
2700		4		minor silt, dark orange-brown	
2800		4			
2900		3			
3000		2			
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 fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	24	Lot 391

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, respread topsoil, gravels	
200		2			
300		6		dense	
400		9			
500		11		Engineered FILL, silt, sand, angular gravels	
600		6		greys and browns, moist'	
700		6			
800		4			
900		5			
1000		6			
1100		7			
1200		UTP		layering of angular gravels	
1300		6		silt dominates, orange-brown, stiff	
1400		4			
1500		4			
1600		3			
1700		6		dense	
1800		9		Silty SAND, orange-brown, moist	
1900		11		minor silt, dark orange-brown	
2000					
2100				EOB @ 2.0m	
2200				Target Depth	
2300					
2400					
2500					
2600					
2700					
2800					
2900					
3000					
3100					
3200					
3300					
3400					
3500					

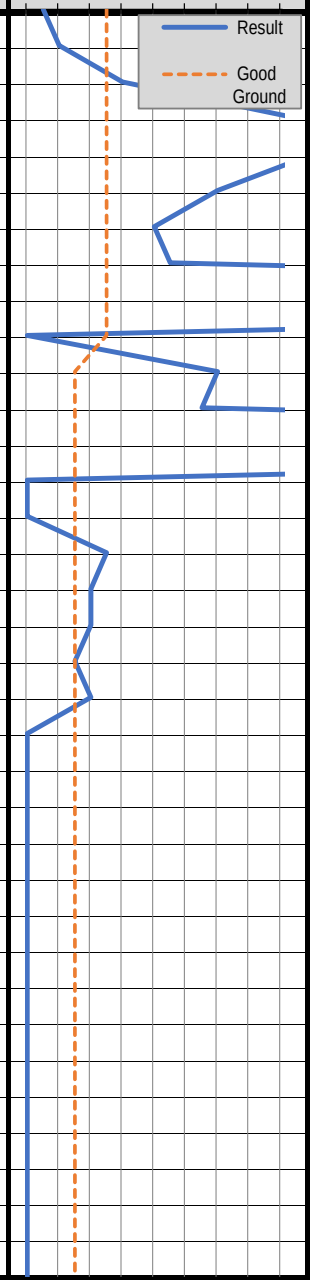
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1 Weather leading up to test was fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	25	Lot 392

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, respread topsoil, gravels	
200		2			
300		6			
400		17		dense	
500		18		Engineered FILL, silt, some sand	
600		12		some angular gravels, brown, moist	
700		8			
800		9		some gravels	
900		UTP			
1000					
1100		12			
1200		11		significant angular gravels, some topsoil, augering difficult	
1300		UTP		very dense	
1400					
1500				difficult to determine transition	
1600		5			
1700		4		medium-dense	
1800		4		Silty SAND, yellow-brown, moist	
1900		3			
2000		4			
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 fine and cool. No recent (10 days) rain.		
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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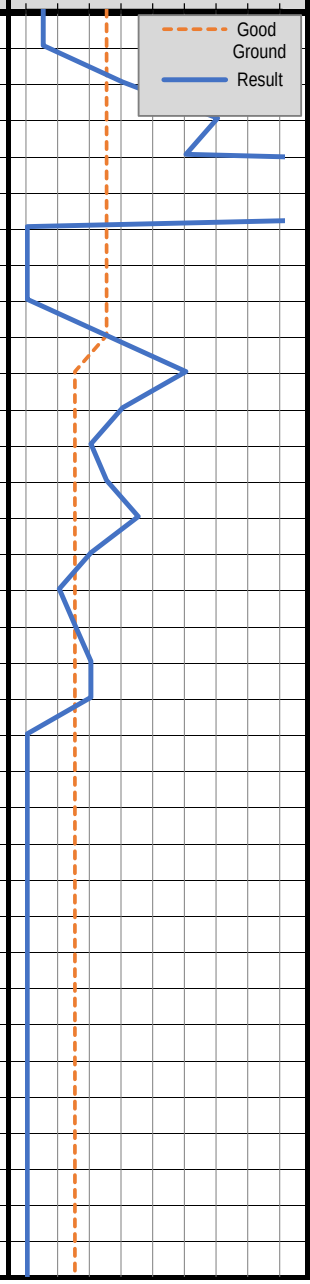
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	26	Lot 393

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		1		FILL, respread topsoil, gravels	
200		1			
300		6			
400		12		dense	
500		10			
600		UTP		Engineered FILL, sand, silt, angular gravels	
700				mixed greys and browns, moist	
800					
900					
1000		5			
1100		10			
1200		6			
1300		4		Silt dominates, orange-brown	
1400		5		very stiff	
1500		7			
1600		4			
1700		2			
1800		3			
1900		4			
2000		4			
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 fine and cool. No recent (10 days) rain.
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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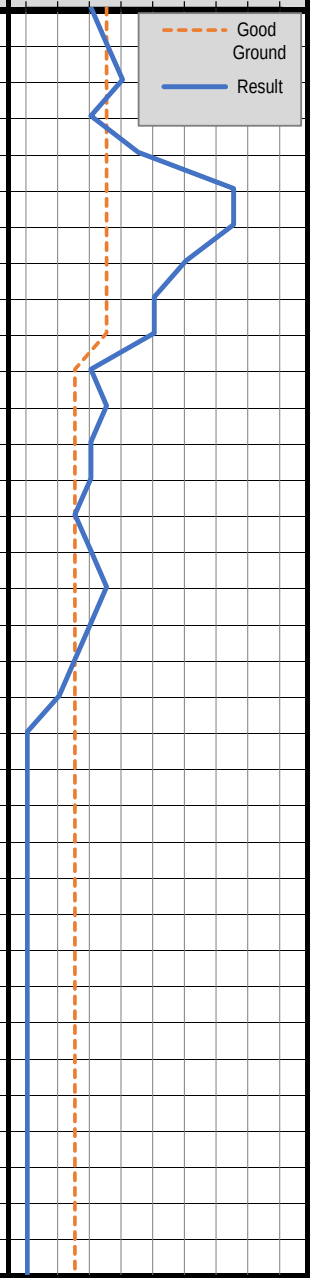
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	27	Lot 394

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		Area heavily trafficked, many gravels	
200		5		FILL, respread topsoil, gravels	
300		6			
400		4		dense	
500		7			
600		13		Engineered FILL, sand, silt, angular gravels	
700		13		mixed greys and browns, moist	
800		10			
900		8			
1000		8			
1100		4			
1200		5		medium dense	
1300		4			
1400		4		Silty SAND, creamy orange-brown, moist	
1500		3			
1600		4		interbedded Silt, some sand	
1700		5			
1800		4			
1900		3			
2000		2			
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 fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	28	Lot 395

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, respread topsoil, gravels	
200		6			
300		7			
400		7		dense	
500		8			
600		5		Engineered FILL, sand, silt, angular gravels	
700		5		mixed greys and browns, moist	
800		7			
900		7			
1000		6			
1100		3		stiff	
1200		2			
1300		2		SILT, some sands, orange-brown	
1400		4			
1500		3		sandy Silt, orange-brown,	
1600		4			
1700		3			
1800		2		loose	
1900		2		SAND, minor silt, minor pumiceous materials	
2000		3		orange-brown, 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

1 Weather leading up to test was fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	29	Lot 396

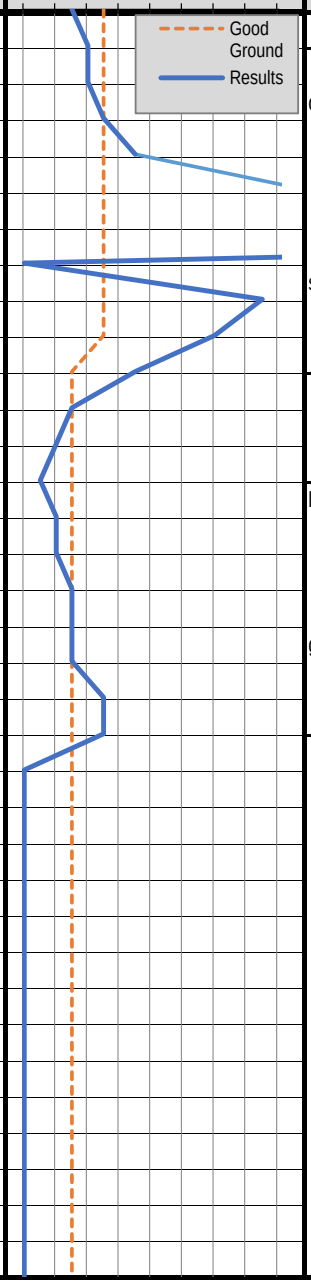
Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm) 0 2 4 6 8 10 12 14 16	Soil Description	Water Table
100		10	Good Ground / Result	FILL, respread topsoil, gravels	
200		12		dense	
300		8			
400		12		Engineered FILL, silt, sand, minor topsoil	
500		15		minor gravels, mixed brown, moist	
600		12			
700		13			
800		12			
900		7		very loose to loose	
1000		7			
1100		5		SAND, some silt, some gravels	
1200		2		orange-brown, moist	
1300		2		some pumiceous materials, minor silt, grey	
1400		1			
1500		2			
1600		1			
1700		2			
1800		2		gravelly Sand	
1900		5			
2000		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 fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	30	Lot 397

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, respread topsoil, gravels	
200		4			
300		4		dense Engineered FILL, silt, sand, some angular gravels minor topsoil, grey, moist	
400		5			
500		7			
600		18			
700		UTP			
800				some gravels, minor topsoil	
900		15			
1000		12			
1100		7		SILT, sand, yellow-brown, some mottling, moist	
1200		3			
1300		2			
1400		1		loose SAND, some silt, grey-brown, moist	
1500		2			
1600		2			
1700		3			
1800		3		gravelly Sand, grey, moist	
1900		3			
2000		5			
2100		5		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 fine and cool. No recent (10 days) rain.
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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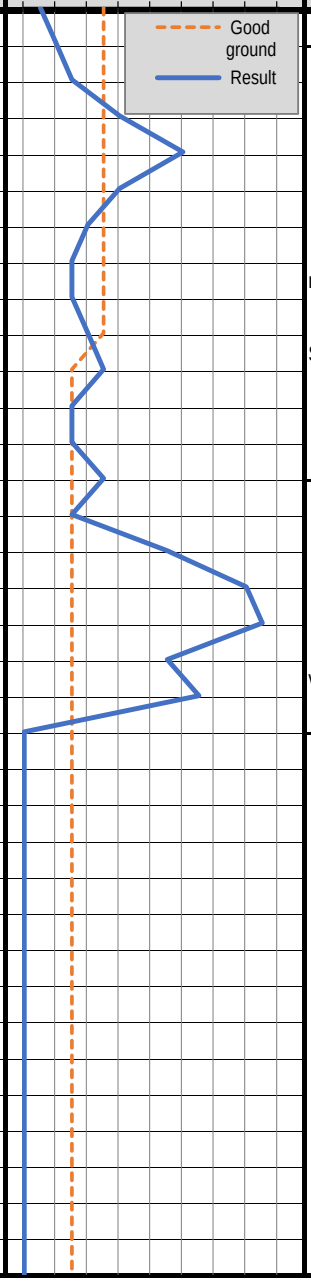
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	31	Lot 398

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, respread topsoil, gravels	
200		2		Engineered FILL, silt, sand, angular gravels mixed browns, moist to very moist	
300		3			
400		6			
500		10			
600		6			
700		4			
800		3		minor topsoil, gravels	
900		3			
1000		4		Silt, minor sand 800-1200mm	
1100		5			
1200		3			
1300		3			
1400		5		SAND, silt, some gravels dark orange-brown, moist	
1500		3			
1600		9			
1700		14			
1800		15			
1900		9		very dense	
2000		11			
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 fine and cool. No recent (10 days) rain.
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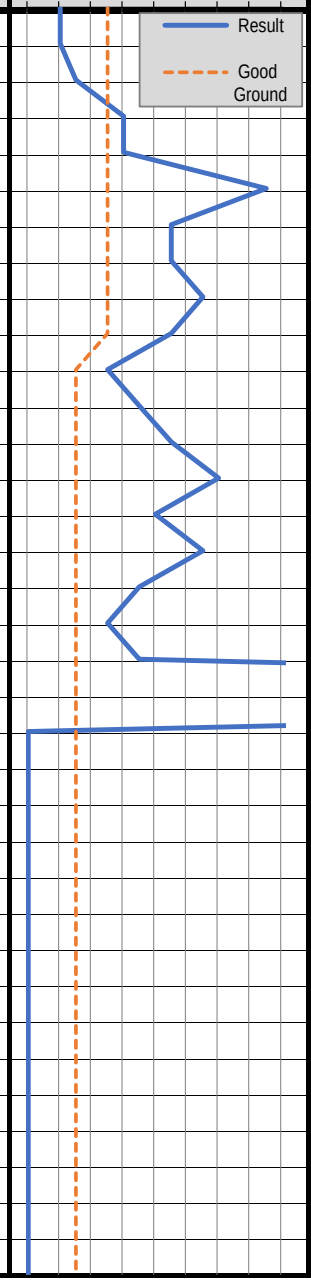
3. Shear Vane readings are converted readings, as per calibration Certificate. (Values are undrained shear strength)
4. Shear Vane records include Re-moulded values where possible
5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	32	Lot 399

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, respread topsoil, gravels	
200		2		dense	
300		3			
400		6		Engineered FILL, silt, sand, angular gravels	
500		6		mixed browns, moist to very moist	
600		15			
700		9			
800		9		minor pumiceous material	
900		11			
1000		9			
1100		5			
1200		7			
1300		9			
1400		12		some angular gravels	
1500		8			
1600		11		difficult to determine transition from Fill	
1700		7		Gravelly SAND, minor pumiceous materials	
1800		5		grey, moist	
1900		7			
2000		UTP		very dense	
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 fine and cool. No recent (10 days) rain.
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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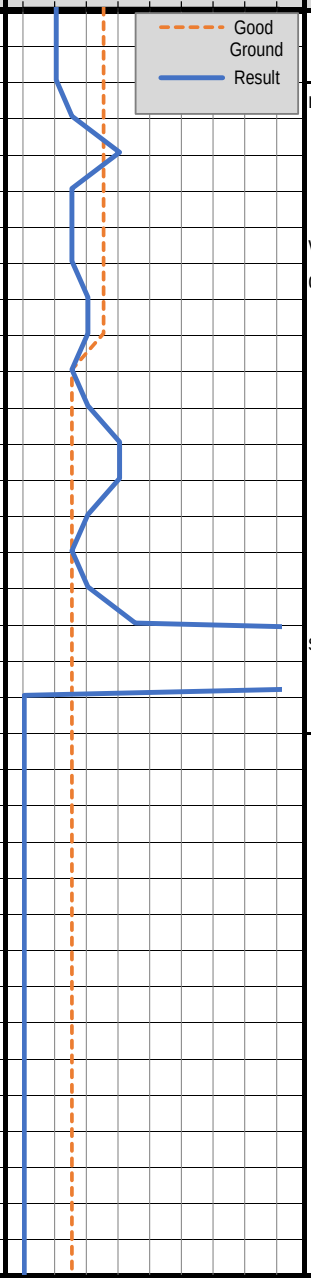
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	33	Lot 400

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, respread topsoil, gravels	
200		2			
300		2		medium-dense	
400		3			
500		6		Engineered FILL, silt, sand, angular gravels	
600		3		mixed browns, moist to very moist	
700		3		very stiff	
800		3		dominated by silt, orange-brown	
900		4			
1000		4			
1100		3			
1200		4			
1300		6			
1400		6			
1500		4			
1600		3			
1700		4			
1800		7		significant angular gravels	
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 fine and cool. No recent (10 days) rain.
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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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	34	Lot 328

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, respread topsoil, gravels	
200		2			
300		4		medium-dense	
400		6			
500		8		Engineered FILL, silt, sand, angular gravels	
600		4		mixed browns, moist to very moist	
700		6		100-700mm dominated by Sand	
800		12		some large gravels	
900		12			
1000		5			
1100		3		700-1400mm dominated by silt, orange-brown, very moist	
1200		4			
1300		3			
1400		5			
1500		6		1400-2000mm dominatred by Sand, angular gravels, grey	
1600		4			
1700		11		moist	
1800		6			
1900		5			
2000		4			
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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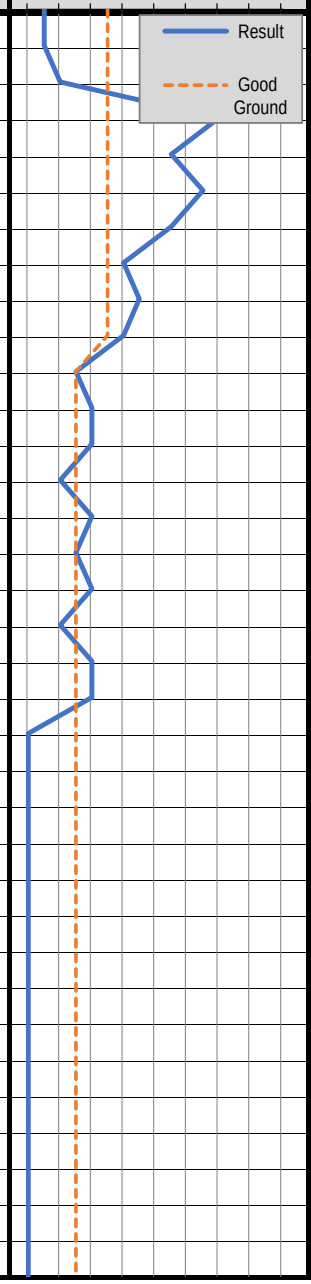
5 Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	35	Lot 401

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		1	FILL, respread topsoil, gravels	
200		1		
300		2	Engineered FILL, silt, sand, angular gravels grey, dry	
400		12		
500		9		
600		11	SAND, some fine to medium gravels, minor silt minor pumiceous materials, light yellow-brown, dry medium-dense minor gravels, moist orange-brown	
700		9		
800		6		
900		7		
1000		6		
1100		3		
1200		4		
1300		4		
1400		2		
1500		4	stiff SILT, minor fine sand, creamy light-brown trace orange-mottling, moist	
1600		3		
1700		4		
1800		2		
1900		4		
2000		4		
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

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5. Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

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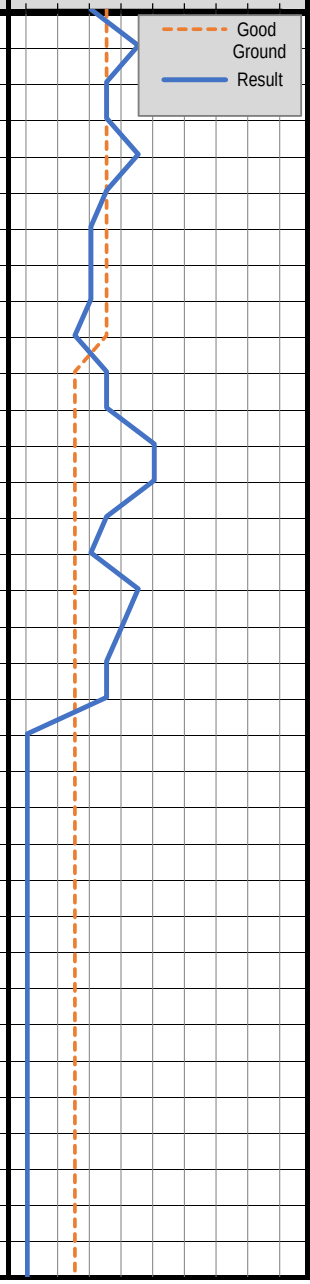
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	**Date**	**Sheet No.**	**Test Site**
GetGeo	6/05/2021	36	Lot 402

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		4		FILL, respread topsoil	
200		7			
300		5		Engineered FILL, silt, sand, minor gravels	
400		5		dark orange-brown, moist	
500		7			
600		5		Silty SAND, yellow-brown, orange mottling, dry	
700		4		minor silt	
800		4			
900		4		some silt, moist	
1000		3			
1100		5			
1200		5		gravelly Sand, minor pumice	
1300		8		grey, moist	
1400		8			
1500		5			
1600		4			
1700		7			
1800		6			
1900		5			
2000		5		EOB @ 2.0m	
2100				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 fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	37	Lot 403

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, respread topsoil, gravels	
200		2			
300		2		dense	
400		3		Engineered FILL, sand, silt, minor angular gravels	
500		4		orange-brown, moist	
600		7		some angular gravels, minor topsoil	
700		4			
800		4			
900		3		medium-dense	
1000		4		SAND, some silt, yellow-brown	
1100		3		orange-mottling, moist	
1200		7			
1300		3			
1400		8		some gravels, minor silt	
1500		6			
1600		4		some pumiceous materials, grey, moist	
1700		4			
1800		5			
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 fine and cool. No recent (10 days) rain.
2 Ground water was not encountered during testing
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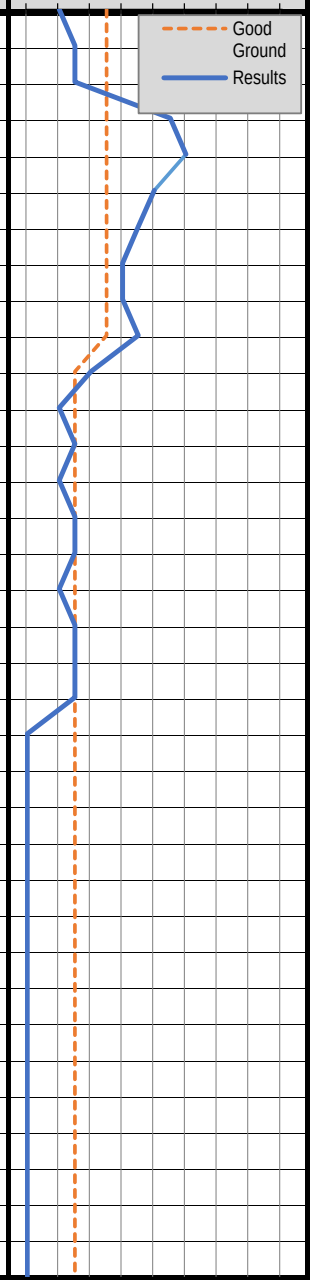
4 Shear Vane records include Re-moulded values where possible
5 Shear Vane Serial No.: 2086 Exp. Date: 2/06/2021

DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	38	Lot 404

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Soil Description	Water Table
100		2	FILL, respread topsoil, gravels	
200		3		
300		3	dense	
400		9	Engineered FILL, sand, silt, minor angular gravels	
500		10	orange-brown, moist	
600		8	some gravels, minor silt, grey	
700		7		
800		6	yellow-brown	
900		6		
1000		7	medim-dense to loose	
1100		4	SAND, some silt, yellow-brown, orange-mottling	
1200		2	moist	
1300		3		
1400		2		
1500		3		
1600		3		
1700		2		
1800		3	some gravels, minor pumiceous materials	
1900		3		
2000		3		
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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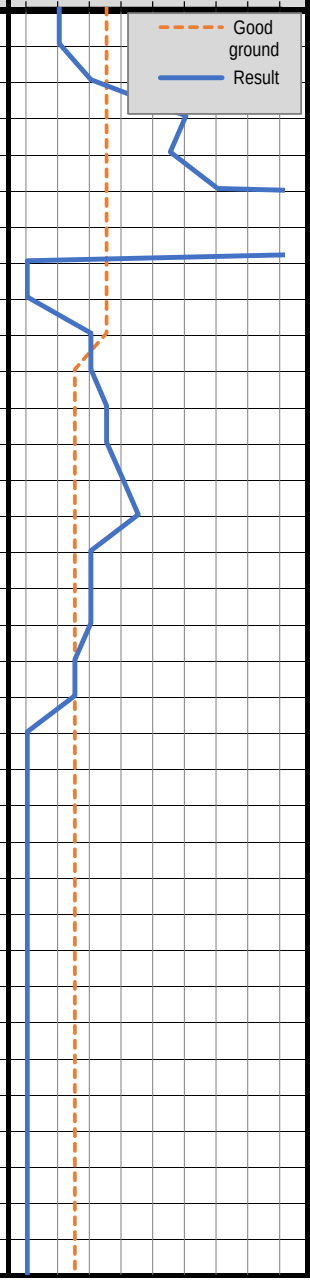
DB CONSULTING ENGINEERS

Project Name		Job Ref.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	39	Lot 405

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



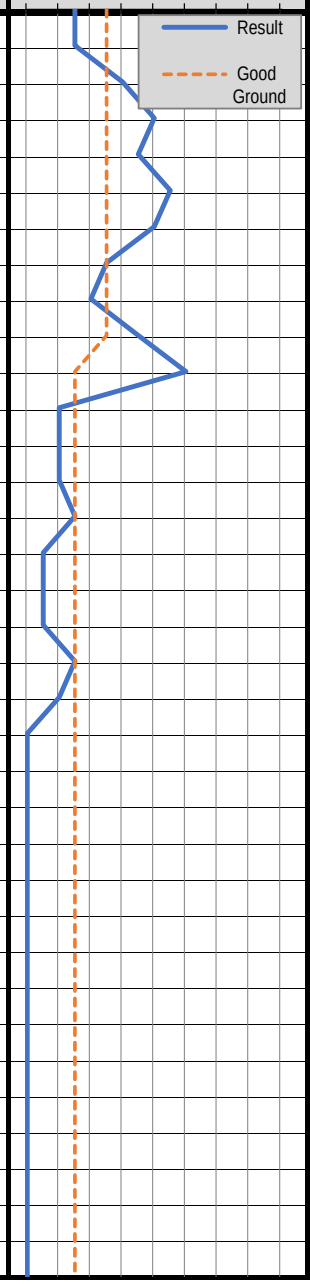
Notes: EOB = End Of Borehole UTP = Unable To Penetrate UTE = Unable To Extract

1. Weather leading up to test was fine and cool. No recent (10 days) rain.
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.	
Greenhill, Subdivision Testing Area M, Stage 14		171738-AREA-M-S14-01	
Tested by	Date	Sheet No.	Test Site
GetGeo	6/05/2021	40	Lot 406

Depth (mm)	Undrained Shear (kPa)	No of blows /100mm	Scala Penetrometer (Blows/100mm)	Soil Description	Water Table
100		3		FILL< respread topsoil, gravels	
200		3			
300		6		Engineered FILL, silt, sand, minor angular gravels brown/grey, moist	
400		8			
500		7			
600		9			
700		8			
800		5		SILT, minor sand, grey-brown, moist	
900		4			
1000		7		SAND, silt, grey-brown, moist	
1100		10			
1200		2			
1300		2		minor silt, grey	
1400		2			
1500		3			
1600		1			
1700		1			
1800		1			
1900		3			
2000		2			
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 fine and cool. No recent (10 days) rain.
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

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.

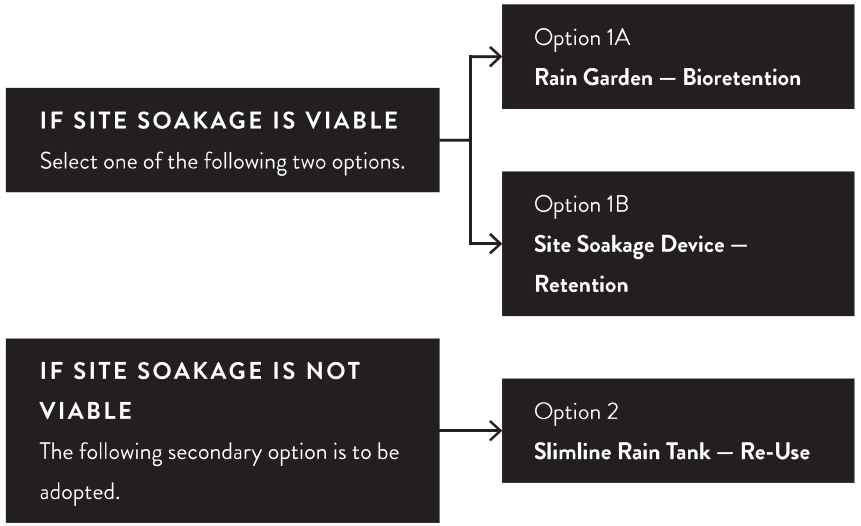
All household fittings are required to have a minimum 3 Star Rating.

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.

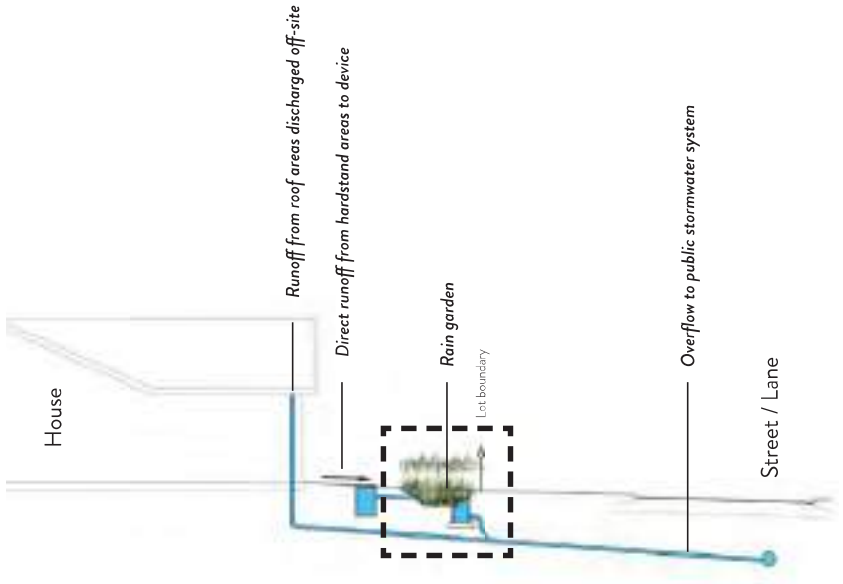


DIAGRAM — **7**
Rain Garden — Bioretention

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.

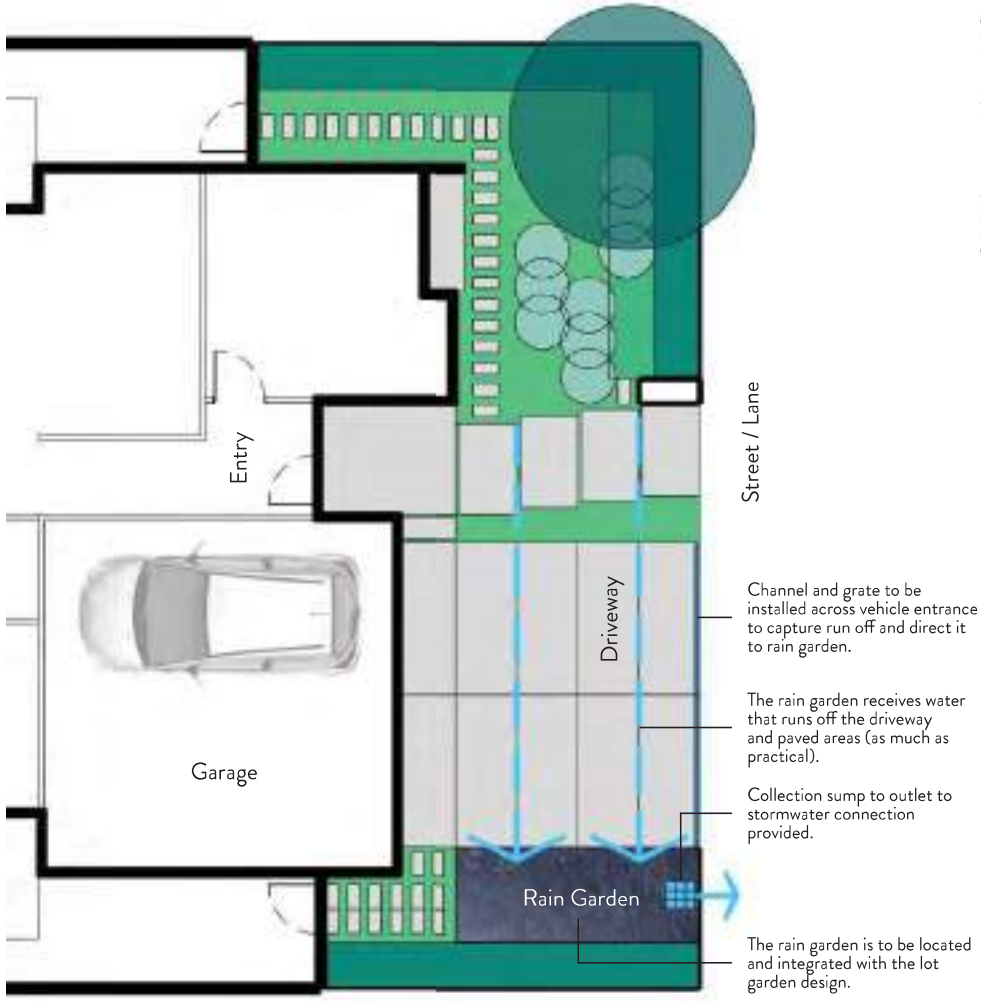


DIAGRAM — **8**

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.

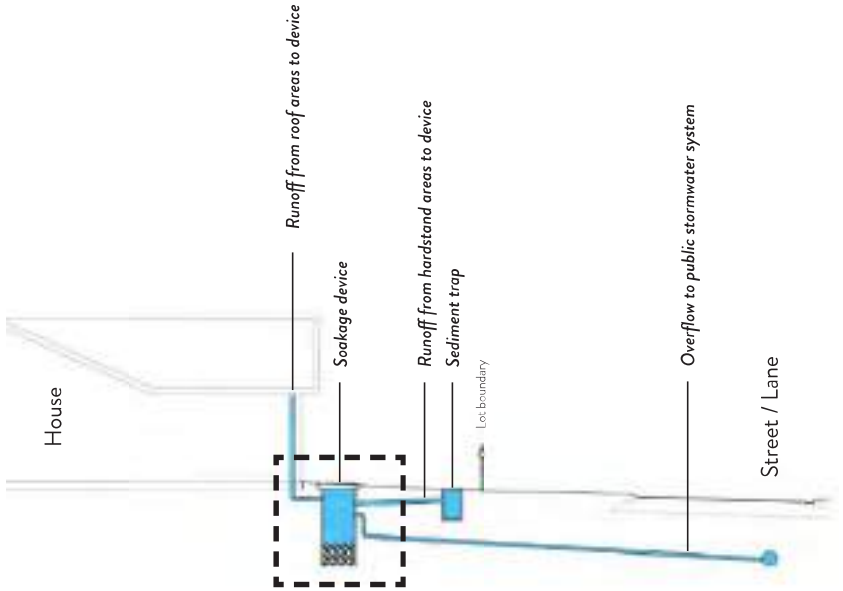


DIAGRAM – **9**

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.

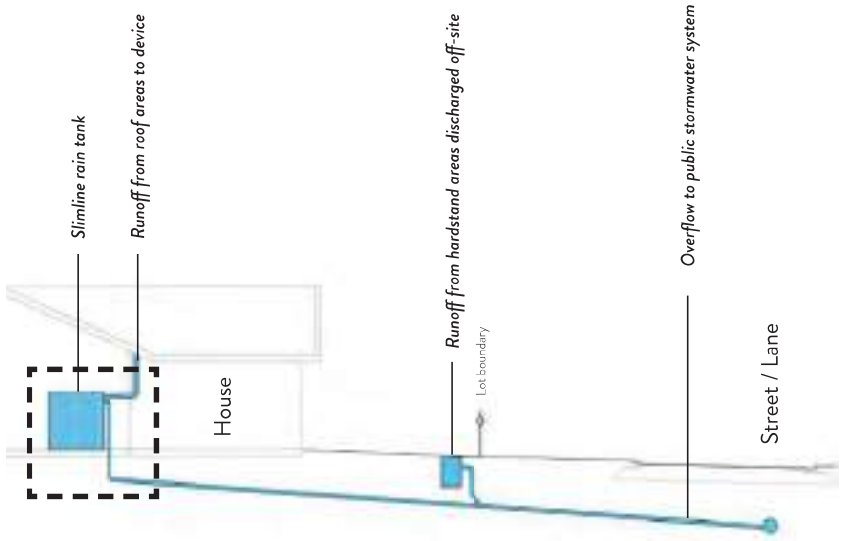


DIAGRAM —**10**

Slimline Rain Tank — Re-use

Lot	Stage	Minimum Lot Level (mRL)	1% AEP Flood Level (mRL)	Flood Level Reference	Calculated Freeboard (to Lot Level)
347	12	38.703	36.46	Swale 3B	2.243
348	12	38.700	36.46	Swale 3B	2.240
349	12	38.751	36.46	Swale 3B	2.291
350	12	39.039	36.46	Swale 3B	2.579
351	12	39.109	36.46	Swale 3B	2.649
352	12	39.179	36.46	Swale 3B	2.719
353	12	39.248	36.46	Swale 3B	2.788
354	12	39.317	36.46	Swale 3B	2.857
355	12	39.393	36.46	Swale 3B	2.933
356	12	39.486	36.46	Swale 3B	3.026
357	13	38.000	38.00	Swale 1D	0.000
358	13	38.100	38.00	Swale 1D	0.100
359	13	38.263	38.00	Swale 1D	0.263
360	13	38.444	38.00	Swale 1D	0.444
361	13	38.670	38.00	Swale 1D	0.670
362	13	38.696	38.00	Swale 1D	0.696
363	13	38.925	38.00	Swale 1D	0.925
364	13	38.802	38.00	Swale 1D	0.802
365	13	38.681	38.00	Swale 1D	0.681
366	13	38.610	38.00	Swale 1D	0.610
367	13	39.145	38.00	Swale 1D	1.145
368	13	39.300	38.00	Swale 1D	1.300
369	13	39.448	38.00	Swale 1D	1.448
370	13	39.571	38.00	Swale 1D	1.571
371	13	39.713	38.00	Swale 1D	1.713
372	13	39.845	38.00	Swale 1D	1.845
373	13	39.987	38.00	Swale 1D	1.987
374	13	40.120	36.46	Swale 3B	3.660
375	14	39.017	37.24	Swale 1	1.777
376	14	39.095	37.24	Swale 1	1.855
377	14	39.170	36.40	Swale 3A	2.770
378	14	39.226	36.40	Swale 3A	2.826
379	14	39.174	36.40	Swale 3A	2.774
380	14	39.122	36.40	Swale 3A	2.722
381	14	39.069	36.40	Swale 3A	2.669
382	14	39.016	36.40	Swale 3A	2.616
383	14	39.162	36.40	Swale 3A	2.762
384	14	39.223	36.40	Swale 3A	2.823
385	14	39.305	36.40	Swale 3A	2.905
386	14	39.366	36.40	Swale 3A	2.966
387	14	39.427	36.40	Swale 3A	3.027

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

APPENDIX 2

Roading QA Documentation

Road Subgrade – 2(a)

- Drawing 21879-M-14-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-14-BR1 (in lieu of strings)
- Clegg Hammer Tests

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 14**	**Date**	**27/01/021**
		Recorded by	**Bikal Baniya**
Material	**Brown Rock SIL**		

Chn	1m from kerb -	Centre Line	1m from kerb - Right	Notes
50	**20**			
60			**33**	
70	**25**			
80			**37**	
90	**29**			
100			**26**	
110	**31**			
120			**30**	
130	**20**			
140			**22**	
150	**24**			

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 34 Stage 15 **Date** 27/01/021

Recorded by Bikal Baniya

Material Brown Rock SIL

Chn	1m from kerb - Left	Centre Line	1m from kerb - Right	Notes
770	**33**			
780			**37**	
790	**32**			
800			**28**	
810	**22**			
820			**26**	
830	**23**			
840			**30**	
850	**25**			
860			**28**	

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 36 Stage 15**	**Date**	**26/01/021**
		Recorded by	**Bikal Baniya**
Material	**Brown Rock SIL**		

Chn	1m from kerb - Left	Centre Line	1m from kerb - Right	Notes
190	**22**			
200			**24**	
210	**31**			
220			**21**	
230	**33**			
240			**28**	
250	**19**			
260			**34**	
270	**24**			
280			**29**	
290	**20**			
300			**23**	
310	**31**			

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 (Please see Stage 12)

BASECOURSE COMPACTION CONTROL
TNZ - B2 TEST RESULTS

Project :	Greenhill Park - Stage 14	Sample description :	GAP40 (ex Tauhei Quarry)		
Location :	Road 22	Nuclear densometer no :	16253		
Client :	Online Contractors (2016) Limited	Solid density (tested) :	2.73	t/m³	
Contractor :	Online Contractors (2016) Limited	Max dry density (tested) :	2.22	t/m³	
Tested by :	J. Waru-Savage, C. Robertson	Opt. water content (tested) :	6.0	%	
Date tested :	22/04/21				

Project No :	2-68015.00
Lab Ref No :	HA7252b_NDM R
Client Ref No :	

Nuclear Densometer Test Results															
Test Number	1	2	3	4	5	6	7								
Test Position	CH80	CH90	CH100	CH110	CH115	CH140	CH150								
Offset	RHS OWT	LHS OWT	RHS OWT	LHS OWT	RHS OWT	RHS OWT	LHS OWT								
Probe Depth (mm)	B/S	B/S	B/S	B/S	B/S	B/S	B/S								
Wet Density (t/m³)	2.25	2.31	2.33	2.23	2.28	2.24	2.24								
Dry Density (t/m³)	2.14	2.20	2.22	2.13	2.18	2.15	2.15								
Water Content (%)	5.3	4.9	4.9	4.7	4.7	4.3	4.3								
% of MDD	96	99	100	96	98	97	97								
% Saturation	52	55	58	45	51	43	44								

Oven Corrected Test Results															
Dry Density (t/m³)					NOT TESTED										
Water Content (%)															
% of MDD															
% Saturation															

Test Methods	Notes
Insitu Density : NZS 4407 : 2015, Test 4.3 for Backscatter Mode	MDD from WSP, Hamilton Lab - Lab Ref No: HA6289/2_VHMDD (Sept 2021) CH130 - Raised concrete pad, unable to test

Note: This report replaces HA7252b_NDM, dated 23/04/2021. This is because of a mistake in the location name.

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*

Date reported : 23/04/21 Date : 04/05/21

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

BASECOURSE COMPACTION CONTROL
TNZ - B2 TEST RESULTS

Project :	Greenhill Park - Stage 14	Sample description :	CAP40 (ex Tauhei Quarry)		
Location :	Road 32	Nuclear densometer no :	16253		
Client :	Online Contractors (2016) Limited	Solid density (tested) :	2.73	t/m³	
Contractor :	Online Contractors (2016) Limited	Max dry density (tested) :	2.22	t/m³	
Tested by :	J. Waru-Savage, C. Robertson	Opt. water content (tested) :	6.0	%	
Date tested :	22/04/21				

Project No :	2-68015.00
Lab Ref No :	HA7252b_NDM
Client Ref No :	

Nuclear Densometer Test Results

Test Number	1	2	3	4	5	6	7							
Test Position	CH80	CH90	CH100	CH110	CH115	CH140	CH150							
Offset	RHS OWT	LHS OWT	RHS OWT	LHS OWT	RHS OWT	RHS OWT	LHS OWT							
Probe Depth (mm)	B/S	B/S	B/S	B/S	B/S	B/S	B/S							
Wet Density (t/m³)	2.25	2.31	2.33	2.23	2.28	2.24	2.24							
Dry Density (t/m³)	2.14	2.20	2.22	2.13	2.18	2.15	2.15							
Water Content (%)	5.3	4.9	4.9	4.7	4.7	4.3	4.3							
% of MDD	96	99	100	96	98	97	97							
% Saturation	52	55	58	45	51	43	44							

Oven Corrected Test Results

Dry Density (t/m³)					NOT TESTED									
Water Content (%)														
% of MDD														
% Saturation														

Test Methods	Notes
Insitu Density : NZS 4407 : 2015, Test 4.3 for Backscatter Mode	MDD from WSP, Hamilton Lab - Lab Ref No: HA6289/2_VHMDD (Sept 2021) CH130 - Raised concrete pad, unable to test

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*

Date reported : 23/04/21 Date : 23/04/21

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 7 856 2870
Website www.wsp.com/nz

BASECOURSE COMPACTION CONTROL
TNZ - B2 TEST RESULTS

Project :	Greenhill Park - Stage 14	Sample description :	GAP40 (ex Tauhei Quarry)	
Location :	Road 34	Nuclear densometer no :	16253	
Client :	Online Contractors (2016) Limited	Solid density (tested) :	2.73	t/m³
Contractor :	Online Contractors (2016) Limited	Max dry density (tested) :	2.22	t/m³
Tested by :	J. Waru-Savage, C. Robertson	Opt. water content (tested) :	6.0	%
Date tested :	22/04/21			

Project No :	2-68015.00
Lab Ref No :	HA7252c_NDM
Client Ref No :	

Nuclear Densometer Test Results

Test Number	1	2	3	4	5	6	7	8	9					
Test Position	CH850	CH840	CH830	CH820	CH810	CH800	CH790	CH780	CH770					
Offset	LHS OWT	RHS OWT	LHS OWT	RHS OWT	LHS OWT	RHS OWT	LHS OWT	RHS OWT	LHS OWT					
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)	2.23	2.22	2.26	2.26	2.24	2.29	2.23	2.25	2.28					
Dry Density (t/m³)	2.10	2.09	2.13	2.13	2.11	2.17	2.10	2.11	2.15					
Water Content (%)	6.0	6.2	5.8	6.0	6.1	5.5	6.0	6.7	6.2					
% of MDD	95	94	96	96	95	98	95	95	97					
% Saturation	55	55	57	59	57	58	55	62	62					

Oven Corrected Test Results

Dry Density (t/m³)														
Water Content (%)					NOT TESTED									
% of MDD														
% Saturation														

Test Methods	Notes
Insitu Density : NZS 4407 : 2015, Test 4.3 for Backscatter Mode	MDD from WSP, Hamilton Lab - Lab Ref No. HA6289/2_VHMDD (Sept 2020)

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*

Date reported : 23/04/21 Date : 23/04/21

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 7 856 2870
Website www.wsp.com/nz

BASECOURSE COMPACTION CONTROL
TNZ - B2 TEST RESULTS

Project :	Greenhill Park- Stage 14	Sample description :	GAP40 ex Tauhei Quarry		
Location :	Road 34	Nuclear densometer no :	33576		
Client :	Online Contractors (2016) Ltd	Solid density (tested) :	2.73	t/m³	
Contractor :	Online Contractors (2016) Ltd	Max dry density (tested) :	2.22	t/m³	
Tested by :	C.Robertson, S.Cooke	Opt. water content (tested) :	6.0	%	
Date tested :	29/04/21				

Project No :	2-68015.00
Lab Ref No :	HA7277_NDM
Client Ref No :	Retest

Nuclear Densometer Test Results														
Test Number	1	2	3	4	5	6	7	8	9					
Test Position	CH860	CH850	CH840	CH830	CH820	CH810	CH800	CH790	CH780					
Offset	RWT	LWT	RWT	LWT	RWT	LWT	RWT	LWT	RWT					
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)	2.34	2.33	2.33	2.38	2.36	2.36	2.37	2.38	2.38					
Dry Density (t/m³)	2.22	2.22	2.21	2.26	2.23	2.25	2.26	2.27	2.26					
Water Content (%)	5.4	5.3	5.0	5.1	5.7	5.2	5.1	5.1	5.3					
% of MDD	100	100	100	102	101	101	102	102	102					
% Saturation	65	62	59	68	70	66	67	68	70					

Oven Corrected Test Results														
Dry Density (t/m³)														
Water Content (%)					NOT TESTED									
% of MDD														
% Saturation														

Test Methods	Notes
Insitu Density : NZS 4407 : 2015, Test 4.3 for Backscatter Mode	Max dry density from : WSP Hamilton Lab- Lab Ref No. HA6280/2_VHMDD (Sept 2020)

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*

Date reported : 30/04/21 Date : 30/04/21

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BASECOURSE COMPACTION CONTROL
TNZ - B2 TEST RESULTS

Project :	Greenhill Park - Stage 14	Sample description :	TNZ40 (ex Gleeson Quarry)		
Location :	Road 36	Nuclear densometer no :	16253		
Client :	Online Contractors (2016) Limited	Solid density (tested) :	2.67	t/m³	
Contractor :	Online Contractors (2016) Limited	Max dry density (tested) :	2.18	t/m³	
Tested by :	J. Waru-Savage, C. Robertson	Opt. water content (tested) :	7.0	%	
Date tested :	22/04/21				

Project No :	2-68015.00
Lab Ref No :	HA7252a_NDM
Client Ref No :	

Nuclear Densometer Test Results

Test Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Test Position	CH340	CH330	CH320	CH310	CH300	CH270	CH260	CH250	CH240	CH230	CH220	CH210	CH200	CH190
Offset	RHS OWT	LHS OWT	RHS OWT	RHS OWT	LHS OWT	RHS OWT	RHS OWT	LHS OWT	RHS OWT	RHS OWT	LHS OWT	RHS OWT	RHS OWT	LHS OWT
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	B/S	B/S
Wet Density (t/m³)	2.27	2.23	2.28	2.24	2.33	2.30	2.32	2.35	2.34	2.34	2.24	2.34	2.31	2.23
Dry Density (t/m³)	2.16	2.13	2.18	2.11	2.22	2.21	2.24	2.26	2.25	2.25	2.15	2.25	2.21	2.15
Water Content (%)	4.9	4.7	4.7	5.9	5.0	4.0	3.6	4.1	3.8	3.7	4.2	3.9	4.3	4.1
% of MDD	99	97	100	97	102	101	103	104	103	103	98	103	102	98
% Saturation	56	49	56	60	65	51	50	60	55	54	46	55	56	45

Oven Corrected Test Results

Dry Density (t/m³)					NOT TESTED									
Water Content (%)														
% of MDD														
% Saturation														

Test Methods	Notes
Insitu Density : NZS 4407 : 2015, Test 4.3 for Backscatter Mode	MDD from WSP, Hamilton Lab - Lab Ref No: HA6290/1_VHMDD (Sept 2021) CH290 & CH280 - Raised concrete pad, unable to test

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*

Date reported : 23/04/21 Date : 23/04/21

ACCREDITED IANZ TESTING LABORATORY

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BENKELMAN BEAM
TEST REPORT

Project :	Greenhill Park - Stage 14
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. Robertson

Project No :	2-68015.00
Lab Ref No :	HA7252b R
Client Ref :	

Test Results

Location Metres	Deflections (mm) LHS OWT	Deflections (mm) RHS OWT			Comments
80		1.02			
90	0.88				* Indicates that there was a raised concrete pad therefore, unable to test.
100		0.88			
110	0.62				
115		0.84			LHS OWT = Left Hand Side Outer Wheeltrack
130	*				RHS OWT = Right Hand Side Outer Wheeltrack
145		0.88			
150	0.84				
	0.94				90 Percentile calculated for all data in columns 1 to 2

Deflection Statistical Analysis (for all deflections)

Maximum (mm): 1.02	Minimum (mm) : 0.62	Average (mm): 0.85

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

Note: This report replaces HA7252b, dated 23/04/2021. This is because of a mistake in the location name.

Date tested : 22/04/2021
Date reported : 23/04/2021

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*
Date : 4/05/2021

ACCREDITED IANZ TESTING LABORATORY

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BENKELMAN BEAM TEST REPORT

Project :	Greenhill Park - Stage 14
Location :	Road 32
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. Robertson

Project No :	2-68015.00
Lab Ref No :	HA7252b
Client Ref :	

Test Results

Location Metres	Deflections (mm) LHS OWT	Deflections (mm) RHS OWT			Comments
80		1.02			
90	0.88				* indicates that there was a raised concrete pad therefore, unable to test.
100		0.88			
110	0.62				
115		0.84			LHS OWT = Left Hand Side Outer Wheeltrack
130	*				RHS OWT = Right Hand Side Outer Wheeltrack
145		0.88			
150	0.84				
	0.94				90 Percentile calculated for all data in columns 1 to 2.

Deflection Statistical Analysis (for all deflections)

Maximum (mm): 1.02	Minimum (mm) : 0.62	Average (mm): 0.85

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

Date tested : 22/04/2021
Date reported : 23/04/2021

Approved

Designation : *Senior Civil Engineering Technician*
Date : 23/04/2021

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BENKELMAN BEAM
TEST REPORT

wsp

Project :	Greenhill Park - Stage 14
Location :	Road 34
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. Robertson

Project No :	2-68015.00
Lab Ref No :	HA7252c
Client Ref :	

Test Results

Location Metres	Deflections (mm) LHS OWT	Deflections (mm) RHS OWT			Comments
850	0.92				
840		0.98			
830	1.08				
820		0.68			
810	1.14				LHS OWT = Left Hand Side Outer Wheeltrack
800		1.58			RHS OWT = Right Hand Side Outer Wheeltrack
790	1.30				
780		1.48			
770	1.12				
	1.5				90 Percentile calculated for all data in columns 1 to 2.

Deflection Statistical Analysis (for all deflections)

Maximum (mm): 1.58	Minimum (mm) : 0.68	Average (mm): 1.14

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

Date tested : 22/04/2021
Date reported : 23/04/2021

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*
Date : 23/04/2021

ACCREDITED IANZ TESTING LABORATORY

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BENKELMAN BEAM
TEST REPORT

Project :	Greenhill Park- Stage 14
Location :	Road 34
Client :	Online Contractors (2016) Ltd
Contractor :	Online Contractors (2016) Ltd
Test method :	TNZ T/1 1977
Pavement type :	GAP40
Pavement temp °C :	-
Weight on rear axle:	8.3 tonnes
Tested by :	C.Robertson, S.Cooke

Project No :	2-68015.00
Lab Ref No :	HA7277
Client Ref :	Retest

Test Results

Location Metres	Deflections (mm) Left WT	Right WT			Comments
780		1.24			
790	1.28				
800		0.88			
	1.27				90 Percentile calculated for all data in columns 1 to 2.

Deflection Statistical Analysis (for all deflections)

Maximum (mm): 1.28	Minimum (mm) : 0.88	Average (mm): 1.13

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

Date tested : 29/04/2021
Date reported : 30/04/2021

IANZ Approved Signatory

Designation : *Senior Civil Engineering Technician*
Date : 30/04/2021

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BENKELMAN BEAM TEST REPORT

Project :	Greenhill Park - Stage 14
Location :	Road 36
Client :	Online Contractors (2016) Limited
Contractor :	Online Contractors (2016) Limited
Test method :	TNZ T/1 1977
Pavement type :	TNZ40
Pavement temp °C :	-
Weight on rear axle:	8.3 tonnes
Tested by :	J. Waru-Savage, C. Robertson

Project No :	2-68015.00
Lab Ref No :	HA7252a
Client Ref :	

Test Results

Location	Deflections (mm)				Comments
Metres	LHS OWT	RHS OWT			
340		0.80			
330	0.78				* indicates that there was a raised concrete pad therefore, unable to test.
320		0.82			
310	0.88				
300		0.84			LHS OWT = Left Hand Side Outer Wheeltrack
290	*				RHS OWT = Right Hand Side Outer Wheeltrack
280		*			
270	0.72				
260		0.84			
250	0.74				
240		0.80			
230	0.80				
220		0.90			
210	0.92				
200		0.80			
190	1.28				
	0.91				90 Percentile calculated for all data in columns 1 to 2.

Deflection Statistical Analysis (for all deflections)

Maximum (mm): 1.28	Minimum (mm) : 0.72	Average (mm): 0.85

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

Date tested : 22/04/2021
Date reported : 23/04/2021

IANZ Approved Signatory

Designation : Senior Civil Engineering Technician
Date : 23/04/2021

ACCREDITED IANZ TESTING LABORATORY

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Average	90%	MAX
1.1	1.35	1.8

Test Date 22/04/2021

ROAD 34

Location

Meters	Left OWT	Centre	Right OWT
850	0.92		
840			0.98
830	1.08		
820			0.68
810	1.14		
800			0.88
790	1.28		
780			1.24
770	1.12		

Average	90%	MAX
1.04	1.248	1.28
PASS	PASS	PASS

ONLINE CONTRACTORS

M. Giles BEC present 20/4

CONSTRUCTION DIMENSIONS

Contract:

Job No.:

Site: GHP

Date: 29/04/021

Stage: ~~##~~ stage 14

Recorded by: Bikal Baniya

Material: AP40

Subgrade TNZ F/ tolerance -20 mm 0 mm

Subbase TNZ B/2 tolerance -20 mm 0 mm

Basecourse TNZ B/3 tol. -5 mm 15 mm

String fill: ~~[illegible]~~ 230 mm

	Chn.	Edge (2m from kerb) 8m	Left 4m	2m	Centre Left 1m	Centre Right 1m	Right (0 2m from Kerb) 2m	4m	Edge 8m	Offset
Rd 34	780	230	~~230~~		230		235			
	790	235			230		240			
	800	240			235		235			
	810	235			235		235			
	820	230			235		240			
	830	235			230		230			
	840	240			235		235			
	850	240			230		235			
	860	240			230		240			
Rd 22	50	230			230		240			
	80	230			230		235			
	90	235			235		235			
	100	235			230		230			
	110	235			235		240			
	120	230			235		230			
	140	235			225		230			
	150	240			225		235			
Rd 36	330	240			~~235~~ 240	240	240			
	320	240			240	240	235			
	310	235			240	245	240			
	300	225			230	225	235			
	270	230			235	235	230			
	260	240			240	235	230			
	250	235			240	240	235			
	240	240			240	240	240			
	230	235			240	230	235			
	220	230			235	230	230			
	210	235			240	230	230			
	200	235			235	230	225			
	190	235			240	230	230			

APPENDIX 2(c)

Roading QA Documentation

Surfacing & RAMM Data

- HCC pavement RAMM data
- Surfacing RAMM data

F3.9 RAMM PAVEMENT DATA

(to be completed for each road section)

Subdivision	GREENHILL PARK STAGE 14		
Road No / Name	ROAD 22 (KIBBLEWHITE RD)		
Start m	50	Start Description	LOT 401
End m	150	End Description	LOT 406
Width	5.5m		

Basecourse

Date Completed	28-4-2021
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	100m
Width	6m
Depth	500mm
Backfill Material	BLUE BROWN ROCK

Subgrade

CBR Without Stabilisation	
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 14

Road No / Name: ROAD 34 (OGILVIE AVE)

Start m: 780 Start Description: LOT 382

End m: 860 End Description: ROAD 22

Width: 5.5m

Basecourse

Date Completed: 28-4-2021

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: 80 m

Width: 6m

Depth: 500 mm

Backfill Material: BLUE BROWN ROCK

Subgrade

CBR Without Stabilisation:

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 14

Road No / Name: ROAD 36 (GUILLAUME ST)

Start m: 190m Start Description: LOT 395

End m: 340m End Description: LOT 402

Width: 5.5m

Basecourse

Date Completed: 28-4-2021

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: 150m

Width: 6m

Depth: 500 mm

Backfill Material: BLUE BROWN ROCK

Subgrade

CBR Without Stabilisation:

Material:

Stabilised? (No) Cement / Lime

% Stabilising Agent:

Stabilised Depth:

Stabilised CBR:

F3.7 RAMM ASPHALT DATA

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

Subdivision: Stage 14 - Greenhill.

Road No / Name: Road 34, 36 and 22

Start m: _____ Start Description: _____

End m: _____ End Description: _____

Width: _____

Contractor: Online Contractors.

Date of Work: 04/05/21

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

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

Area Surfaced (m^2): 1706 m^2

Average thickness (mm): 31 mm.

Laying Temperature (°C): 148°C

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

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

F3.8 RAMM CHIPSEAL DATA

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

Subdivision	Stage 14 - Greenhill Subdivision.
Road No / Name	Road 34, 36 and 22.
Start m	Start Description
End m	End Description
Width	
Contractor	Online Contractors.
Date of Work	03/05/21
Seal Type (circle one)	(1 Coat) Racked in Chipseal / 2 Coat / Other:
Seal Reason	Waterproofing First Coat / Second Coat / Asphalt Membrane
Area Sealed (m^2)	1706 m^2
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	Tauranga.
Total Volume of Binder Used (Hot) (Litres)	2388.4 litres.
Temperature of Binder (°C)	80° C.
Residual Binder Rate (L/m^2)	1.0 L/m^2
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 ☐

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	190 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	D. 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)* No		

Developer/Contractor's name *(please print)*	Developer/Contractor's signature	Date signed
Council Representative's name *(please print)*	Council Representative's signature	Date signed

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

Sample ID	Sample Type	Site	Date Sampled	Date Received	Parameter Name	Result	Units	Lab	Status
2021002785	Hamilton Reticulation Maintenance	Lot 398 Greenhill	4/05/2021	4/05/2021	Heterotrophic Plate Count 35ºC	5	cfu/mL	HCC Laboratory	e
2021002785	Hamilton Reticulation Maintenance	Lot 398 Greenhill	4/05/2021	4/05/2021	Temperature On Arrival	13.7	ºC	HCC Laboratory	ev
2021002785	Hamilton Reticulation Maintenance	Lot 398 Greenhill	4/05/2021	4/05/2021	E.coli Enumerated	<1	MPN/100mL	HCC Laboratory	ev
2021002785	Hamilton Reticulation Maintenance	Lot 398 Greenhill	4/05/2021	4/05/2021	Total Coliforms Enumerated	<1	MPN/100mL	HCC Laboratory	ev
2021002785	Hamilton Reticulation Maintenance	Lot 398 Greenhill	4/05/2021	4/05/2021	Time Sampled (client)	08:05		Client	ev
2021002785	Hamilton Reticulation Maintenance	Lot 398 Greenhill	4/05/2021	4/05/2021	Sampler (client)	Murray Giles		Client	ev

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
Te Kaunihera o Kirikiriroa

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 Miller						
Location: Pipe length (MH To MH)	1EH to 18.5	18.5 to 18.4	18.4 to 18.3	18.3 to 18A1	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 – Pitgrad	☑	☑	☑	☑	☑
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 Millers					
Location: Pipe length (MH To MH)	18.2 to 18	18.2 to 17.2	19.2 to 19	17.2 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 – 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	☑	☑	☑	☑	☑

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 Milker						
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	☑	☑	☑	☑	☑

West Construction — 16/12/20

Developer/Contractor **Date**

F5.3 WASTEWATER MANHOLE CHECKLIST

Engineering Plan Number(s) 21879-M-13-501					
Name of certified drainlayer: Zane Millar					
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-13-501				
Name of certified drainlayer:	Zane Mullen				
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.	☑	☑	☑	☑	☑

WEST 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 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.	☑	☑	☑	☑	☑	✓

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):	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-S01
From MH	19.2-20.2- 21.3-21.2-211-201
Acceptance Criteria:	CBR 7 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	FE1, 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-Sos
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**

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			

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

Barry Pearson

From:	Barry Pearson (Shrimpton and Lipinski Limited Partnership (HQ - Tauranga)) <bpearson@sltga.co.nz>
Sent:	Friday, 30 April 2021 10:50 AM
To:	Martyn Smith (Hamilton City Council (Hamilton))
Subject:	Document Issue No. 16 - Greenhill Park Stage 14 CCTV data
Attachments:	19-30378-03 - Greenhill Park - Area M Stage 13, 14 and 15 - Issue 16.pdf

19-30378-03 - Greenhill Park - Area M Stage 13, 14 and 15 Issue 16

Issued by: Barry Pearson (Shrimpton and Lipinski Limited Partnership)
On: 30 Apr 2021

HCC Sub-division Team,

Greenhill Park Area 'M' RC 011.2018.00006632.001

Please find attached link to Greenhill Park – Stage 14 CCTV data of stormwater and wastewater for your review.
Note that we intend to submit the Engineering Works Clearance Report for Stage 14 on approx. the 20th May for Hamilton City Council review and approval.

Regards,
Barry

Access the documents for this issue

Recipients:

Subdivison Hamilton City Council (Hamilton City Council (Hamilton))
Martyn Smith (Hamilton City Council (Hamilton))

BARRY PEARSON

S&L
Land Development
and Design Specialists

36 Kereiti Street, Tauranga 3110

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:									
Location: Pipe length (MH To MH)	SW001S	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
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	☑	☑	☑	☑	☐

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 2021

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

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		

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	☑	☑	☑	☑	☑

WBT 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.....

Barry Pearson

From:	Barry Pearson (Shrimpton and Lipinski Limited Partnership (HQ - Tauranga)) <bpearson@sltga.co.nz>
Sent:	Friday, 30 April 2021 10:50 AM
To:	Martyn Smith (Hamilton City Council (Hamilton))
Subject:	Document Issue No. 16 - Greenhill Park Stage 14 CCTV data
Attachments:	19-30378-03 - Greenhill Park - Area M Stage 13, 14 and 15 - Issue 16.pdf

19-30378-03 - Greenhill Park - Area M Stage 13, 14 and 15 Issue 16

Issued by: Barry Pearson (Shrimpton and Lipinski Limited Partnership)
On: 30 Apr 2021

HCC Sub-division Team,

Greenhill Park Area 'M' RC 011.2018.00006632.001

Please find attached link to Greenhill Park – Stage 14 CCTV data of stormwater and wastewater for your review.
Note that we intend to submit the Engineering Works Clearance Report for Stage 14 on approx. the 20th May for Hamilton City Council review and approval.

Regards,
Barry

Access the documents for this issue

Recipients:

Subdivison Hamilton City Council (Hamilton City Council (Hamilton))
Martyn Smith (Hamilton City Council (Hamilton))

BARRY PEARSON

S&L
Land Development
and Design Specialists

36 Kereiti Street, Tauranga 3110

APPENDIX 6

Landscaping Certifications

- Landscaping final inspection form requested from HCC (Not Included)

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-S14
ID: HN-086-17

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

22nd April 2021

ACCEPTANCE BY ULTRAFAST FIBRE LIMITED AS TELECOMMUNICATIONS OPERATOR

Subdivision: Greenhill Park Ruakura Residential Stage 14 (33 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 9 [Greenhill Park] Hamilton, Subdivision by Chedworth Properties Ltd. (the "**Subdivision**") Lot 702, DP 534481, to provide network connections to Lot 375 through to Lot 406, and Lot 511 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: 22nd April 2021

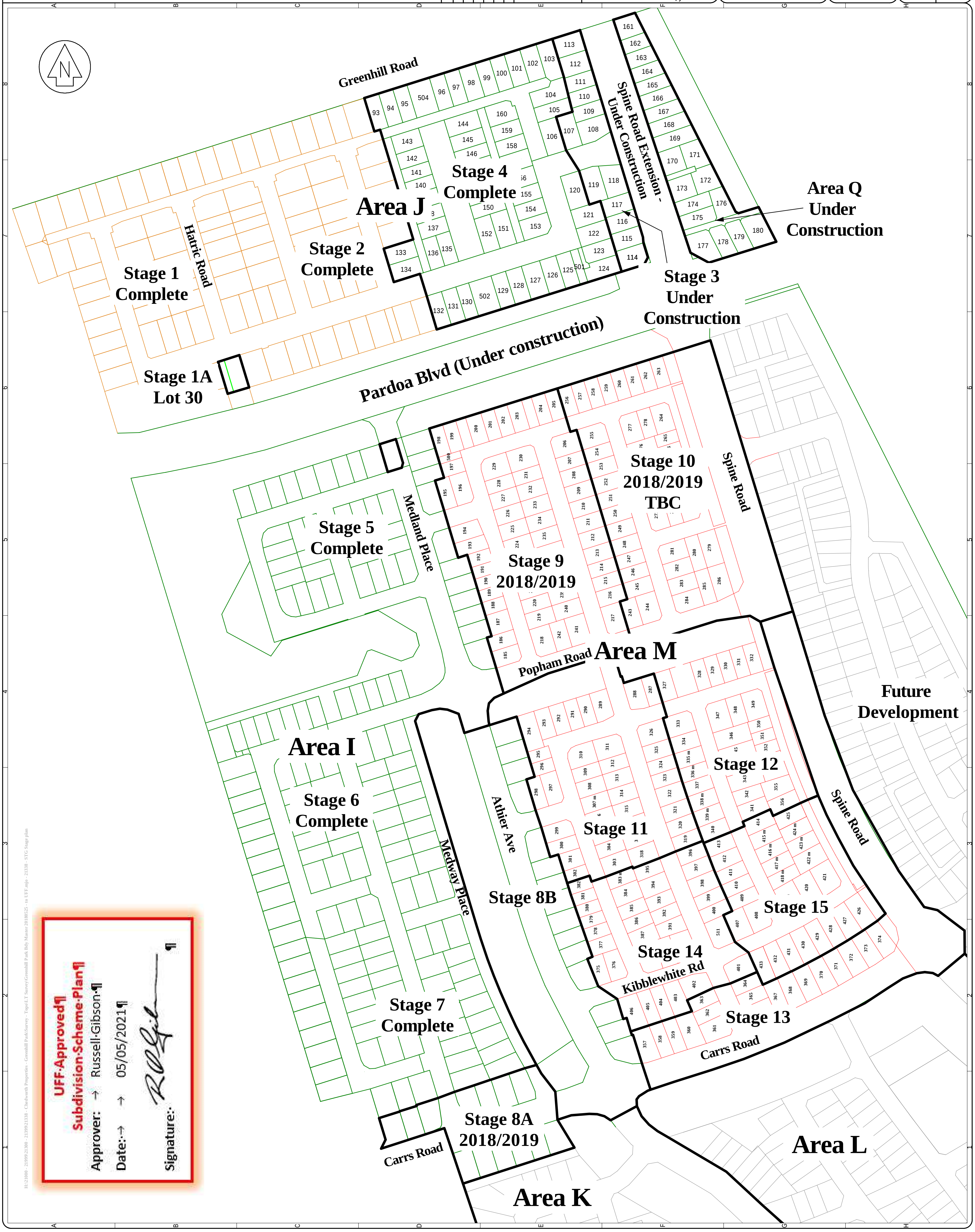
S & L CONSULTANTS LTD
SURVEYORS - ENGINEERS - PLANNERS
36 Kereiti Street, Mt Maunganui New Zealand
P.O. Box 231 Ph.(07)577-6069
Fax(07)577-6065
Email: slconsultants@sltga.co.nz
Web Site: www.sltga.co.nz

Title
Greenhill Park Stage Layout Plan

Copyright on this drawing is reserved
Original Scales @ A1
1:1500 (A1)
1:3000 (A3)
Do Not Scale Dimensions
Drawing No
21338 - STG
Revision:
Date

Checked by.	Rev. No.	Description	DATE	NAME	DATE	SIGNED
				Surveyed		
				Designed		
				Drawn		
				Checked		
				Approved		

REFERENCES



UFF Approved
Subdivision Scheme Plan
Approver: Russell Gibson
Date: 05/05/2021
Signature:

H:\21000 - 21999\21300 - 21399\21338 - Chedworth Properties - Greenhill Park\Survey - Topo\LT Survey\Greenhill Park Bdy Master 20180525 - to UFF.mjo - 21338 - STG Stage plan

Completion Certificate

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

SUBJECT: Greenhill Park Subdivision – Stage 14

(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

IBEX 10 Year Limited Warranty – Project Warranty

Date: 04-03-2021

Project: Greenhill Park, Stage 14 Ref: 7140-00

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.

Checklist 8.1

WORK CLEARANCE FROM NETWORK OPERATORS

To : **Planning Guidance Manager** **Date: 10 May 2021**
Hamilton City Council

Re : **Chedworth Properties Ltd Subdivision**
Stage 14– Lots 328, 375-406
Greenhill Park, Hamilton

I hereby certify all of the required work in relation to the installation, commissioning and reinstatement of our network services have been satisfactorily completed in this development area.

As built plans have been completed.

Subdivision : Stage 14 Greenhill Park, Hamilton - 40060051

Developer's Name : Chedworth Properties Ltd

Contractor's Name : ……..

Signed by : ……..
on behalf of WEL Networks Ltd

or

Signed by : ……..
on behalf of Natural Gas Corp of NZ

or

Signed by : ……..
on behalf of Telecom NZ Ltd

(one form required from each network operator)

31 May 2021 Ref: 7110

PRODUCER STATEMENT FOR STREET LIGHTING

Project: Greenhill Park Area M Stage 14

Location: Cairns Road Hamilton

The lighting for this Project has been designed to comply with the New Zealand standard AS/NZS 1158.3.1 2020 for P4 and P5 using Perfectlite and AGi32 lighting design software and in conjunction with the Hamilton City Council and NZTA Code of Practice requirements

Product The P Category luminaires are Mini Stork 4 LED Optic P (lens 21), 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 27 220 1281 T +64 9 915 1083
merritt@ibexlighting.com
IBEXLIGHTING.COM

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

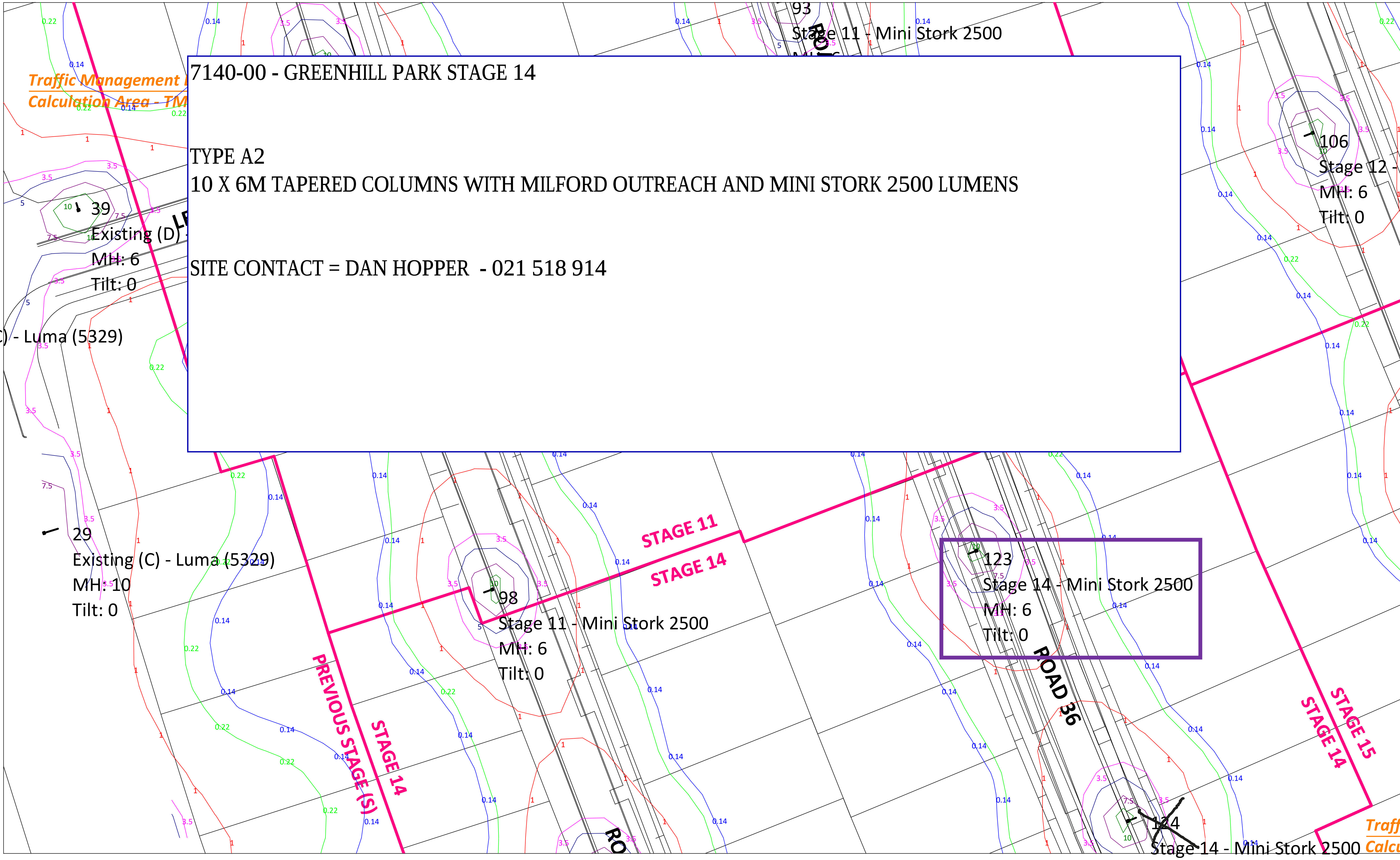
Kingsley Holt Supply Chain & Innovation Manager

7140-00 - GREENHILL PARK STAGE 14

TYPE A2

10 X 6M TAPERED COLUMNS WITH MILFORD OUTREACH AND MINI STORK 2500 LUMENS

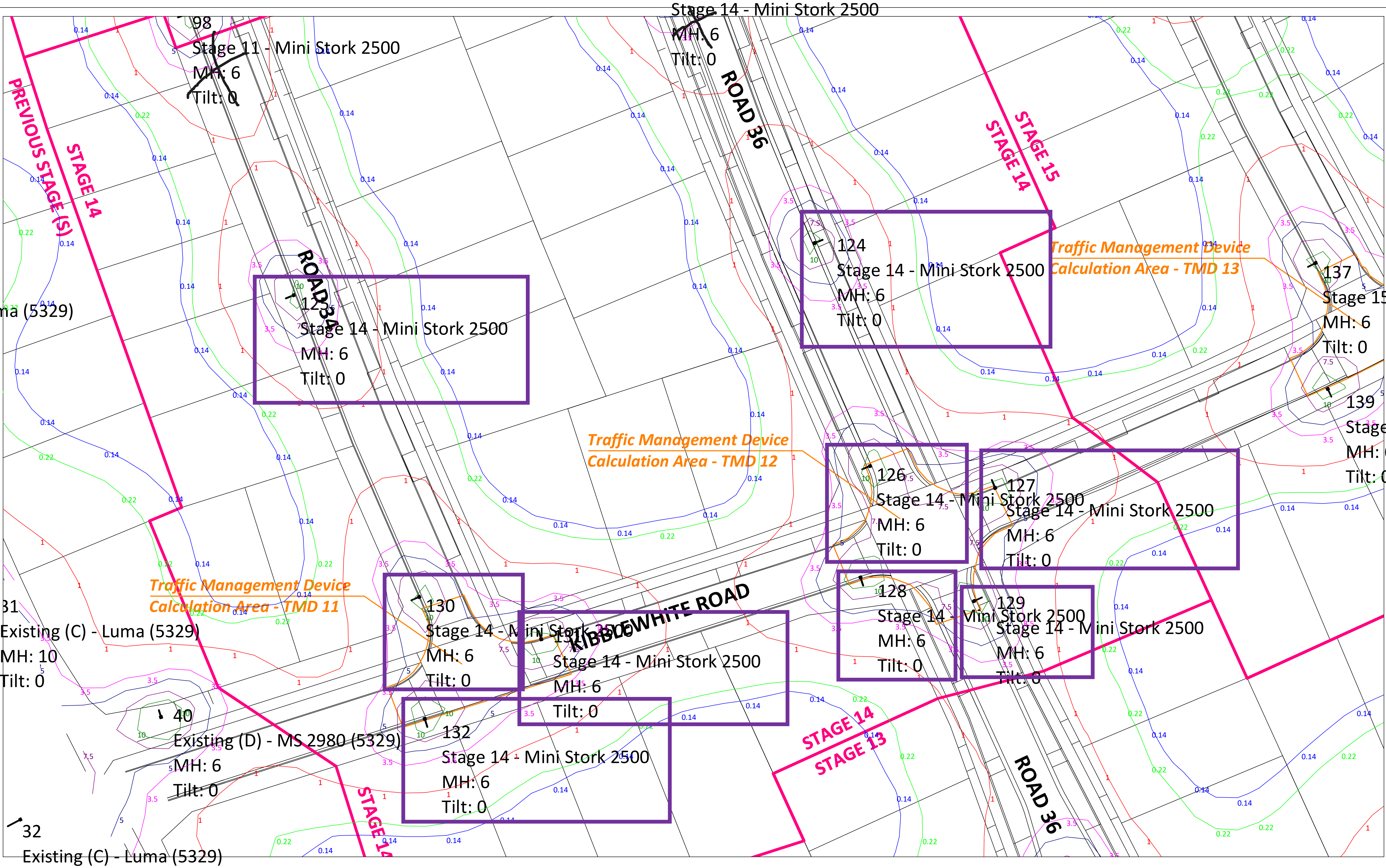
SITE CONTACT = DAN HOPPER - 021 518 914



14 | B

Chedworth Properties Limited

IBEX CONCEPT TO SOLUTION



aNbOG				Chedworth Properties Limited / GREENHILL
16	B			

IBEX
CONCEPT TO SOLUTION

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 Slork 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)(e) of the Building Act 2004

Electrical Certificate of Compliance & Electrical Safety Certificate

Reference/Certificate ID No.: NWELCOC157912

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. VOLU 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 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. VOLU 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 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 Lilla 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 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. YIOLU 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.: 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, 20200079
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 ~~7/4~~

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 #114

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 Slank Little Brother LED street luminaire, 2000/5/2019
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

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. VIOLU 35mh 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 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. 20/05/2019
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/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 #1/7

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, 26/05/2019
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/I

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 #/15

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: 2020/2021

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: Manufacturers instructions attached. VOLU 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.: NWELCOC1579/2

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 /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 #/2/

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, 20200220 19
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 #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 Stock 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.: NWELCOC1583 57

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 # 43

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:

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:
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 ESS registration). Also attach a copy of the SDoC to this certificate.
(Or provide reference to readily accessible electronic format, eg internet link)

Identify: SDoC
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.
Livenec 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

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 # 120

Contact Details: (Name and address)

Name of Electrical worker: Yeti Martyn

Registration/Practising licence number: E257490

Phone & email: [illegible]@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: [illegible]

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: [illegible]

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.)

[illegible]

Link:

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

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

Identify: SDoC [illegible]

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

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 # 1DS

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: [illegible]

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: [illegible]
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: [illegible]
Link:

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

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

Identify: SDoC [illegible]
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

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. VICLU Stark Lille Beehive 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.: NWELCOC15832

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 Slank Little Stroller 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 15(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. VIOLI Slink 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.: NWELCOC15834

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: Manufacture's instructions attached. VIOLU Slim Little Brother LED street luminaire. 2000/2019
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)(b) 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 Stork Lite Evolve 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:** 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.: NWELCOC15836

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:

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: Manufacture's instructions attached. VIOLU Slim Little Brother LED street luminaire, 2000/2019
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 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: [redacted]

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 Litio Gutter 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 #:	1250728
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 Accommocation ☐ Industrial ☐ Commercial
☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Work and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yell Marlyn	Registration #:	E257480
			EW121000
CoC details:	Nationwired 15631	☐ 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 000583002 3M

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 ~~part or~~ 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

MBIE1132 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:	021 426 820

Location of Installation

Location details: Greenhill park subdivision, Area M, Streetlight 194, stage 6-15

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 15832		☐ 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 #0058304HSG

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(i-) ☐ 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 ~~/ contravention~~ 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

MBIE1132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

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:	021 426 820

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):	Yeil Marlyn	Registration #:	E267480
			EW121000
CoC details:	Nationwired 16633		☐ 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 8005830GZ0V

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(iv) ☐ Electrical medical area – 5A(2)(a)(vi)
☐ High voltage installation – 6A(2)(a)(ii) ☐ Hazardous area – 6A(2)(a)(v) ☑ Mains work – 5A(2)(b)
☐ Mains parallel generation – 5A(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 ~~/ electrical~~ 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: [signature]

Date: 10/03/21

MBIE4132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

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: Greenhil park subdivision, Area M, Streetlight 136 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 15834	☐ 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 #0058307X8D

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 inapplicable words highlighted in red above.)

Signature:

Date: 10/03/21

MBIE4132 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 #:	1260728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 426 820

Location of installation:

Location details: Greenhill park subdivision, Area M, Streetlight 137, clege 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):	Yall Marlyn	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/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 #0058311V2S

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)(c)(iii) ☐ Animal stunning or moa 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 energised, electrically safe.

(Note. Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature] Date: 10/03/21

MBI 4132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCE | PROFESSIONALISM

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: 021 425 820

Location of Installation

Location details: Greenhill park subdivision, Area M, Streetlight 138 stage 6-15

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 Maryn

Registration #: E257480

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/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 #0058313M2Q

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 ~~/ 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

Electrical Workers Registration Board

SAFETY | COMPETENCE | COMPLIANCE

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:	021 426 820

Location of Installation

Location details: Greenhill park subdivision, Area M, Streetlight 139, stage 6-15

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):	Yell Merlyn	Registration #:	E257490
			EW121000
CoC details:	Nationwired 15637		☐ 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 #0058315F7X

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 ~~accordance~~ / ~~partial 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: Date: 10/03/21

MBD4832 04/12

Electrical Workers Registration Board
SAFETY | COMPETENCE | COMPLIANCE

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 9-16

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare [✓ Miscellaneous (other)]

Certifying Electrical Worker and Certificate of Compliance (CoC) details.

Name of Electrical worker(s): Yeti Martyn
Registration #: E257490
EW121000

CoC details: Nationwired 15782 Streetlight 109
☐ CoC(s) attached

Certifying Electrical Worker 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 90058387K4L

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 inapplicable words highlighted in red above.)

Signature: [illegible]
Date: 10/03/21

EWRB 132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | CONFIDENCE

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 #:	E250728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 426 820

Location of installation:

Location details: Greenhill park subdivision, Area M, Streetlight 110stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial ☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrical Worker and Certificate of Compliance (CoC) details:

Name of Electrical worker(s):	Yell Marryn	Registration #:	E257490
			EW121000
CoC details:	Nationwired 157823 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 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 #0058387K4L

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 / will not be~~, when energised, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

MBI-1132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

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 #: E250726

Email Address: gavin@bodeyspark.co.nz

Telephone: 021 428 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 111 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): Yati Martyn

Registration #: E257490

EW121600

CoC details: Nationwired 15794 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. Imp < 5 Ohm
M.E.N. link. HRPA #0058372D3B

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~~ / 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 energised, electrically safe

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature:

Date: 10/03/21

NIBL1132 04/17

Electrical Workers Registration Board

SAFETY · COMPETENCE · COMPLIANCE

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 112 stage 9-15

Location Type: ☐ Domestic ☐ Non-Domestic Accommodation ☐ Industrial ☐ Commercial
☐ Educational ☐ Healthcare ☑ Miscellaneous (other)

Certifying Electrician Work and Certificate of Compliance (CoC) details

Name of Electrical worker(s):	Yeti Martyn	Registration #:	E257490
			EW121000
CoC details:	Nationwired 15795 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/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 9005837301C

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 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

MBIE 6132 04/17

Electrical Workers Registration Board
SAFETY | COMPETENCY | COMPLIANCE

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: 021 428 620

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetight 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): Yeti Martyn
Registration #: E257490, EW121000
CoC details: Nationwired 15790 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 #00583774VSS

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

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

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 #:	1250725
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 428 820

Location of Installation:

Location details: Greenhall 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)	Yet Martyn	Registration #:	E257490
			EW121000
CoC details:	Nationwired 16797 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.C imp <.5 Ohm
M.E.N. link,. HRPA #0058375X45

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 ~~/ part~~ accordance with the regulations; and the ~~installation / part installation~~ on which the work has been done is, and will be / ~~will not be~~, when delivered, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

MB44132 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:	021 426 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 107atage 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):	Yeil Martyn	Registration #:	E257490
			EW121000
CoC details:	Nallpwired 16791 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 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 #0058363B7H

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 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: Date: 10/03/21

MBIE1132 04/12

Electrical Workers Registration Board

SAFETY | CONFIDENCE | COMPETENCE

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 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 #:	E257490 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 protector, 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 #0058349J4S

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 ~~accordance~~/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

MBIE4132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

Record of Inspection (ROI) of High-Risk Prescribed Electrical Work

(Pursuant to the Electricity (Safety) Regulations 2010)

Reference/Record Number

Nationwired greenhill

Owner (inspector) details:

Name of Inspector:	Gavin Bodey	Registration #:	E250728
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 Martyn	Registration #:	E257490
			EW121000
CoC details:	Nationwired 15E39		☐ 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 #0058365F02

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 / 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

MBIE1152 04/17

Electrical Workers Registration Board

SAFETY | CONSUMER CONFIDENCE | COMPLIANCE

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 021 426 820

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., HRPA #0056356B7T

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 mean conditioning – 6A(2)(c)
☐ Other – please describe

Declaration

I hereby confirm that the work described above has been done ~~in / carried~~ 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

MB44132 04/17

Electrical Workers Registration Board
SAFETY | COMPETENCY | COMPLIANCE

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 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): Yetf Martyn
Registration #: E257490
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.. HRPA #00563B8Y7Y

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 / are 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

MB16132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

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 Bodley	Registration #:	E250728
Email Address:	gavin@bodeyspark.co.nz	Telephone:	021 426 820

Location of Installation:

Location details: Greenhill park subdivision, Area M, Streetlight 122 stage 6-15

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 107914 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. link.. I-RPA #0056390Z19

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 energised, electrically safe

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

MB14|52 04/17

Electrical Workers Registration Board

SAFETY + COMPETENCY + COMPLIANCE

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 115 stage 9-15

Location Type:
- ☐ Domestic
- ☐ Non-Domestic Accommodation
- ☐ Industrial
- ☐ Commercial
- ☐ Educational
- ☐ Healthcare
- ☑ Miscellaneous (other)

Carrying Electrical Work and Certificate of Compliance (CoC) details

Name of Electrical worker(s):	Yeli Martyn	**Registration #:**	E257490
			EW121000
CoC details:	Nationwired 15788 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., HRPA #0056376Z4X

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 / during*~~ accordance with the regulations; and the ~~*installation / part installation*~~ on which the work has been done is, and ~~*will be / was*~~, when enlivened, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: [signature]

Date: 10/03/21

MB11132 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):	Yell Merlyn	Registration #:	E257490 EW121000
CoC details:	Nationwired 16799 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 cabenet 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 #0058377Z6K

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 / ~~will not be~~, when energised, electrically safe.

(Note. Strike out or delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

MBIE 8152 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCE | COMPLIANCE

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 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): Yell Martyn | Registration #: E257490

EW121000

CoC details: Nationwired 15799 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 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 #0C58379H8C

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 inapplicable words highlighted in red above.)

Signature: | Date: 10/03/21

EWRB132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

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:	021 426 820

Location of Installation:

Location details: Greenhill park subdivision. Area M. Streetlight 118 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 157910 Streetlight 118		☐ 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 #0058382P4F

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)(a)(ii) ☐ Hazardous area – 6A(2)(a)(iv) ☑ Mains work – 5A(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 / carried out~~ in accordance with the regulations; and the ~~installation~~ / part installation on which the work has been done is, and will be ~~/ must be~~, when energised, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

NBR4132 04/17

Electrical Workers Registration Board

SAFETY | COMPETENCY | COMPLIANCE

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 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 157812 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 ok.
polarity
M.E.C. imp <.5 Ohm
M.E.N. link.. HRPA #DC58385X04

High Risk Category:

☐ Not to AS/NZS 3000 Part 2 – 6A(2)(a)(i) ☐ Photovoltaic system – 6A(2)(a)(k) ☐ 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 / parts~~ accordance with the regulations; and the ~~installation / part installation~~ on which the work has been done is, and ~~will be / part to be~~, when energised, electrically safe.

(Note: Strike out or delete the inapplicable words highlighted in red above.)

Signature: Date: 10/03/21

MBIE1152 04/17

F3.10 RAMM STREETLIGHT DATA

(to be completed for each change in streetlight type)

Subdivision and stage/Contract: GREENHILL PARK STAGE 14

Number of street lights of this type: 10

General

Date Installed: 22/04/2021

Control Type: (Network Streetlight Feed) / Photocell / Other:

Origin of Power Supply: (Streetlight Circuit) / Metered Power Supply

Light

Manufacturer: VIZULO (IBEX LIGHTING)

Model: MINI STORK

Total Power Consumption (W): 22.3W

Light Height (m): 6m

Tilt Angle (° Degrees): ZERO DEGREES

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 10yr warranty

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 561397
- Schedule of Engineering Value
- 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 561397		
Resource consent number:	011.2018.6632	Date consent issued:	05/09/2018
Stage (if applicable):	14	No. of lots (excluding roads/reserves):	33

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

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

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:	jon.webb@jonwebb.co.nz

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:	LT 561397
Resource consent number:	011.2018.6632
Stage Number:	14

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: 9/5/2021

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

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 14 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 14.*

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 — 3/5/21

Signature of Authorised Agent on behalf of — *Date*

ONLINE CONTRACTORS 2016 LTD
PO BOX 21187
ROTOTUNA
HAMILTON 3256

APPENDIX 4 ii)

PRODUCER STATEMENT — CONSTRUCTION

CONTRACTOR'S CERTIFICATE UPON COMPLETION OF SUBDIVISIONAL WORK

ISSUED BY : Online Contractors 2016
(Contractor)

TO : Chedworth Properties
(Principal)

TO BE SUPPLIED TO: Hamilton City
(Territorial Authority)

IN RESPECT OF : Greenhill Park Stage
(Description of subdivisional work)

AT : Ogilvie Ave, Kibblewhite Rd and Guillaume St, Greenhill
(Address)

Online Contractors 2016 Ltd has contracted to Chedworth Properties
(Contractor) *(Principal)*

to carry out and complete certain subdivisional work in accordance with a contract, titled Contract No. ……
for Earthworks and subdivision civil ("the contract")

I Dan Hopper a duly authorised representative of Online Contractors 2016
(Duly Authorised Agent) *(Contractor)*

hereby certify that Onlne Contractors 2016

has carried out and completed the subdivisional works, other than those outstanding works listed below, in accordance with the contract.

Dan Hopper Date 3rd May 2021
(Signature of Authorised Agent on behalf of)

Online Contractors 2016
(Contractor)

PO Box 21187, Rototuna,

(Address)

Outstanding Works

Title Plan - LT 561397

Survey Number	LT 561397
Surveyor Reference	21879 - Greenhill Park - Stage 14
Surveyor	Scott Rodney Carley
Survey Firm	Shrimpton and Lipinski Limited Partnership
Surveyor Declaration	

Survey Details

Dataset Description	Lots 328, 375 - 406 and 604 Being a Subdivision of Lot 707 DP 560839		
Status	Initiated		
Land District	South Auckland	**Survey Class**	Class A
Submitted Date		**Survey Approval Date**	
		Deposit Date	

Territorial Authorities

Hamilton City

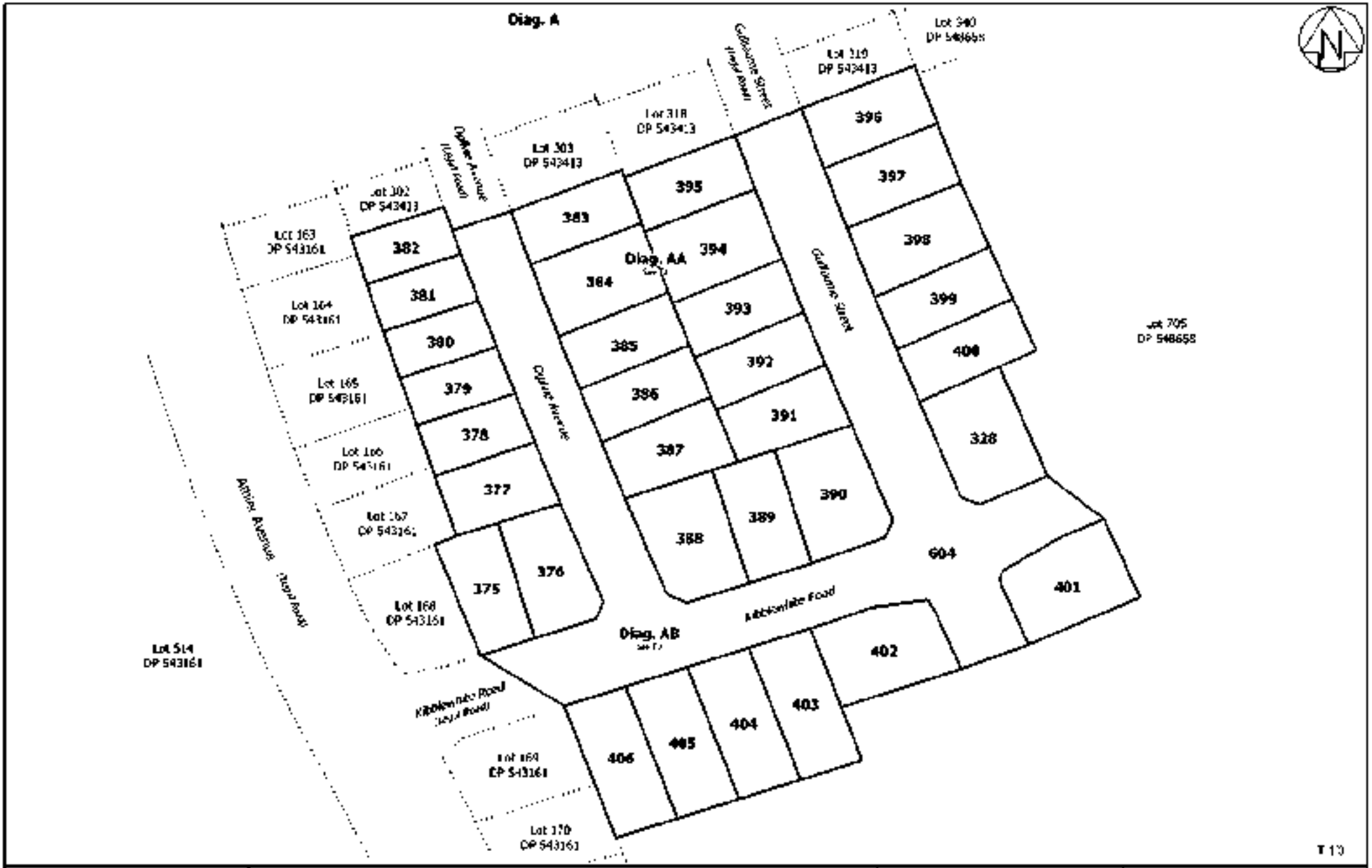
Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Lot 328 Deposited Plan 561397	Fee Simple Title	0.0460 Ha	993190
Lot 375 Deposited Plan 561397	Fee Simple Title	0.0335 Ha	993191
Lot 376 Deposited Plan 561397	Fee Simple Title	0.0381 Ha	993192
Lot 377 Deposited Plan 561397	Fee Simple Title	0.0310 Ha	993193
Lot 378 Deposited Plan 561397	Fee Simple Title	0.0248 Ha	993194
Lot 379 Deposited Plan 561397	Fee Simple Title	0.0228 Ha	993195
Lot 380 Deposited Plan 561397	Fee Simple Title	0.0224 Ha	993196
Lot 381 Deposited Plan 561397	Fee Simple Title	0.0222 Ha	993197
Lot 382 Deposited Plan 561397	Fee Simple Title	0.0218 Ha	993198
Lot 383 Deposited Plan 561397	Fee Simple Title	0.0300 Ha	993199
Lot 384 Deposited Plan 561397	Fee Simple Title	0.0400 Ha	993200
Lot 385 Deposited Plan 561397	Fee Simple Title	0.0300 Ha	993201
Lot 386 Deposited Plan 561397	Fee Simple Title	0.0300 Ha	993202
Lot 387 Deposited Plan 561397	Fee Simple Title	0.0346 Ha	993203
Lot 388 Deposited Plan 561397	Fee Simple Title	0.0450 Ha	993204
Lot 389 Deposited Plan 561397	Fee Simple Title	0.0349 Ha	993205
Lot 390 Deposited Plan 561397	Fee Simple Title	0.0450 Ha	993206
Lot 391 Deposited Plan 561397	Fee Simple Title	0.0323 Ha	993207
Lot 392 Deposited Plan 561397	Fee Simple Title	0.0300 Ha	993208
Lot 393 Deposited Plan 561397	Fee Simple Title	0.0306 Ha	993209
Lot 394 Deposited Plan 561397	Fee Simple Title	0.0400 Ha	993210
Lot 395 Deposited Plan 561397	Fee Simple Title	0.0305 Ha	993211
Lot 396 Deposited Plan 561397	Fee Simple Title	0.0342 Ha	993212
Lot 397 Deposited Plan 561397	Fee Simple Title	0.0349 Ha	993213
Lot 398 Deposited Plan 561397	Fee Simple Title	0.0400 Ha	993214
Lot 399 Deposited Plan 561397	Fee Simple Title	0.0319 Ha	993215
Lot 400 Deposited Plan 561397	Fee Simple Title	0.0322 Ha	993216

Title Plan - LT 561397

Created Parcels

Parcels	Parcel Intent	Area	RT Reference
Lot 401 Deposited Plan 561397	Fee Simple Title	0.0450 Ha	993217
Lot 402 Deposited Plan 561397	Fee Simple Title	0.0457 Ha	993218
Lot 403 Deposited Plan 561397	Fee Simple Title	0.0407 Ha	993219
Lot 404 Deposited Plan 561397	Fee Simple Title	0.0406 Ha	993220
Lot 405 Deposited Plan 561397	Fee Simple Title	0.0406 Ha	993221
Lot 406 Deposited Plan 561397	Fee Simple Title	0.0407 Ha	993222
Lot 604 Deposited Plan 561397	Vesting on Deposit for Road	0.4540 Ha	
Total Area		1.5960 Ha	



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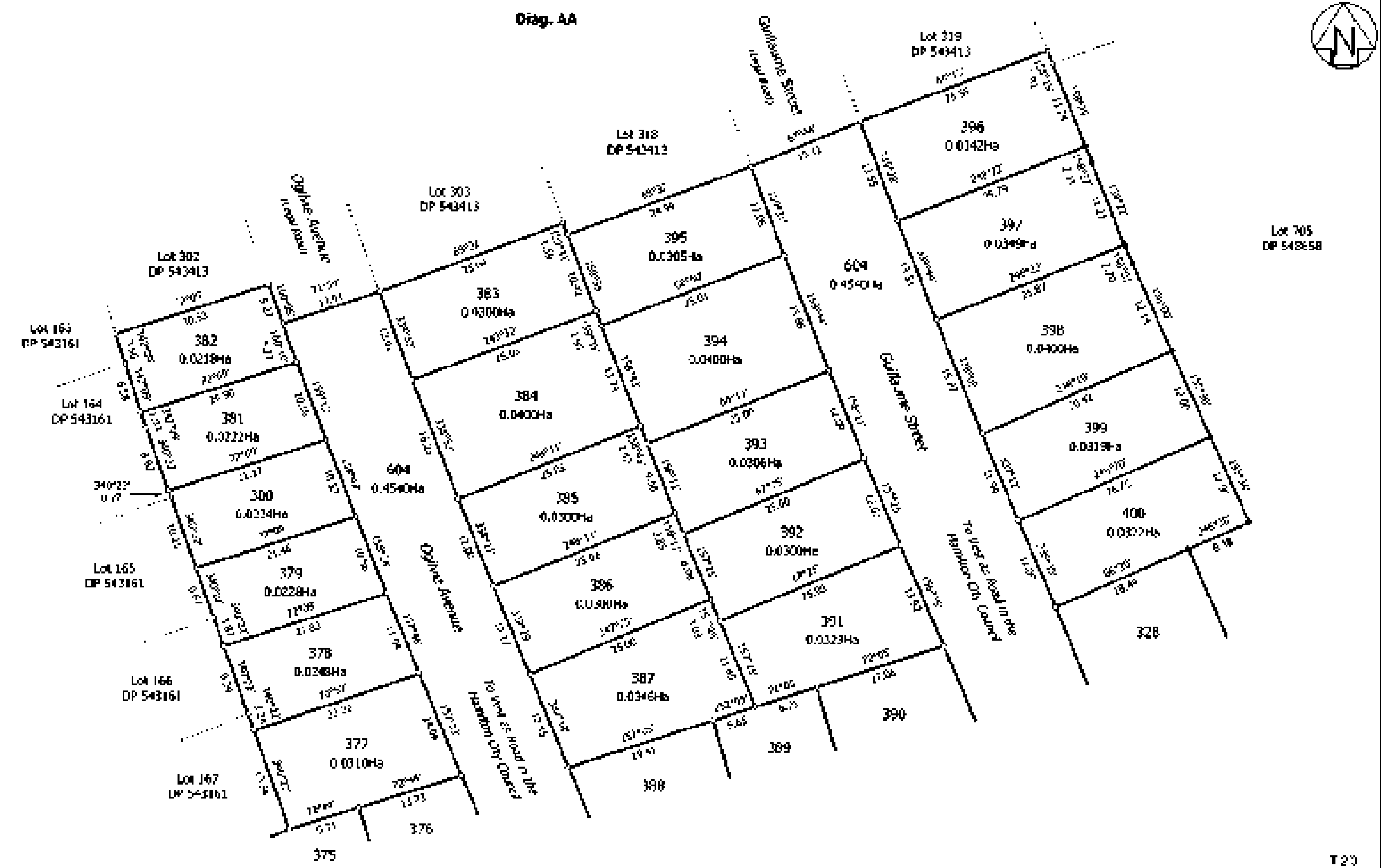
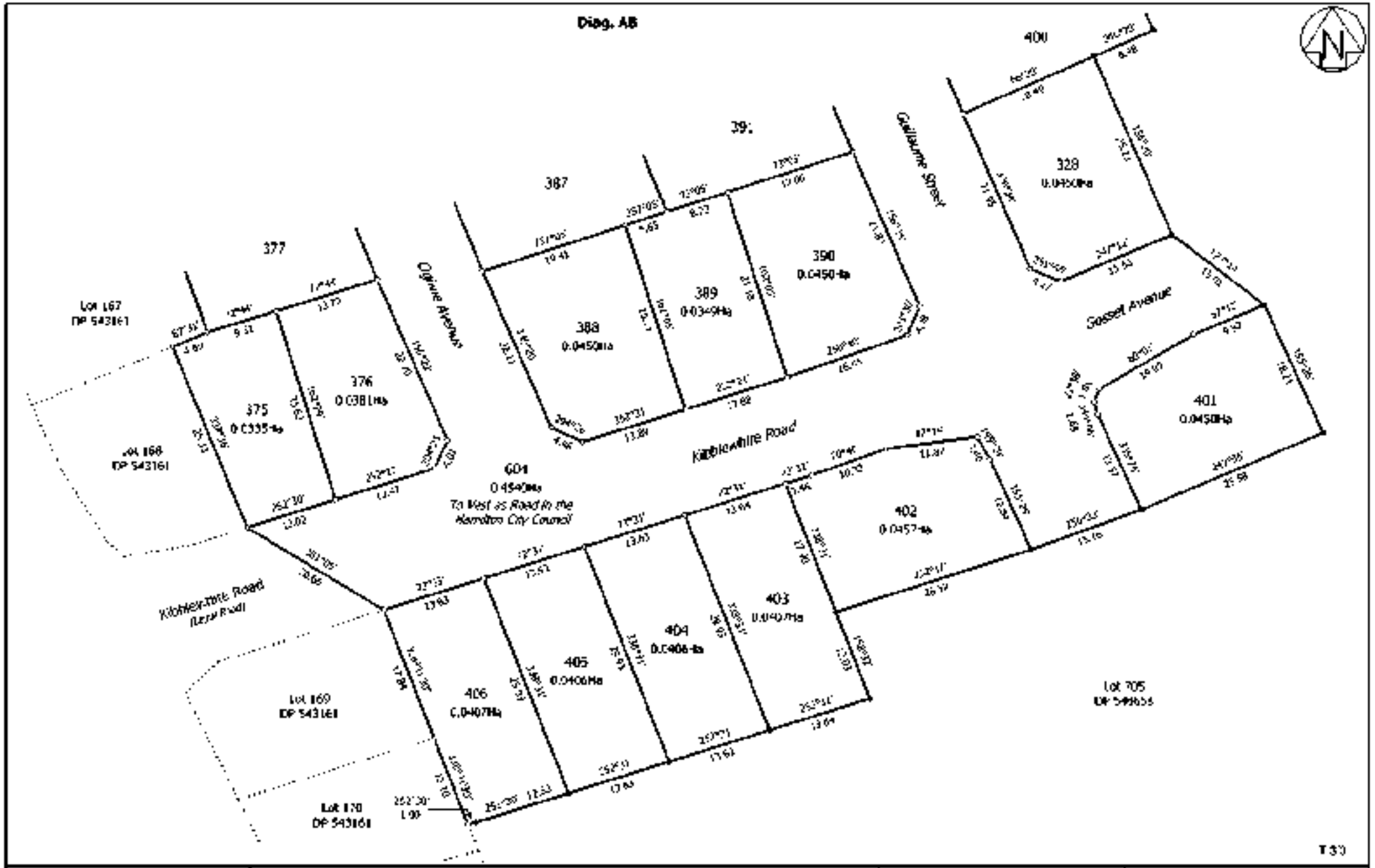
Land District South Auckland Digitally Generated Plan	Lots 328, 375 - 406 and 604 Being a Subdivision of Lot 707 DP 560839	Surveyor Scott Rodney Carley Firm: Shamrock and Lipinski Limited Partn	Title Plan LT 561397 DRAFT


Diag. AA
Lot 319
DP 543413
Lot 318
DP 543413
Lot 303
DP 543413
Lot 302
DP 543413
Lot 705
DP 543658
Lot 163
DP 543161
Lot 164
DP 543161
Lot 165
DP 543161
Lot 166
DP 543161
Lot 167
DP 543161
Guillaume Street
(Legal Road)
Ogilvie Avenue
(Legal Road)
Guillaume Street
Ogilvie Avenue
To Vest as Road in the
Hamilton City Council
To Vest as Road in the
Hamilton City Council
396
0.0142Ha
397
398
0.0400Ha
399
400
395
0.0305Ha
394
0.0400Ha
393
0.0306Ha
392
0.0300Ha
391
0.0323Ha
383
0.0300Ha
384
0.0400Ha
385
0.0300Ha
386
387
0.0346Ha
382
0.0218Ha
381
0.0222Ha
380
0.0224Ha
379
0.0228Ha
378
0.0248Ha
377
0.0310Ha
604
0.4540Ha
604
0.4540Ha
328
390
389
388
376
375

T 2/3



Land District South Auckland Digitally Generated Plan	Lots 328, 375 - 406 and 604 Being a Subdivision of Lot 707 DP 560839	Surveyor Scott Rodney Carley Firm: Shannon and Lipinski Limited Partn	Title Plan LT 561397 DRAFT

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 14

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: 20-5-2021

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)			$953,400
Water supply	(B)			$71,135
Wastewater	(C)			$80,929
Stormwater	(D)			$51,461
Roading	(E)			$390,520.17
Parks	(F)			
Other	(G)			
TOTAL (excluding GST)				$1,547,445.17

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	561397	4540	$953,400	
Recreation reserve			$0.0	
Local purpose reserve			$0.0	
Other - please specify				
		TOTAL	$	
		TOTAL VESTED		

WATER SUPPLY (B)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Mains	Metres	443.1	$11,520	
Ridermains	Metres	306.2	$4,747	
Services	No.	38	$26,790	
Hydrants	No.	4	$10,228	
Sluice and peat values	No.	11	$17,850	
Other - please specify				
	TOTAL		$71,135	
	TOTAL VESTED			

WASTEWATER (C)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Mains	Metres	262.9	$57,588	
Manholes	No.	4	$11,425	
Connections	No.	33	$11,916	
Other - please specify				
	TOTAL		$80,929	
	TOTAL VESTED			

STORMWATER (D)	MEASURE		COST/VALUE	COUNCIL'S CONTRIBUTION
Mains	Metres	134	$24,120	
Manholes	No.	2	$8,602	
Connections	No.	33	$18,739	
Outfalls (inlet/outlet structures)	No.			
Wetland/rain garden planting	Area (m^2)			
Other - please specify				
	TOTAL		$51,461	
	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)	2409	$53,012.60	
Surfacing	Area (m^2)	1572	$56,843.52	
Kerb and channel (full height)	Metres	1021	$46,394	
Berms	Area (m^2)	5959	$19,962.65	
Footpaths (inc. walkways & cycleways)	Area (m^2)	644	$44,436	
Vehicle crossings (excl. residential)	Area (m^2)	140	$16,030	
Road drainage (catchpits & leads)	No.	6	$24,421	
Street lighting	No.	10	$42,915.30	
Signage	No.	2	$410.25	
Subsoil drains	Metres	647.5	$33,024	
Tactile pavers	No.	0	0	
Parking and bus bays	Area (m^2)	463.5	$53,070.75	
Sundries (bridges/culverts/walls/etc)	No.	0	0	
Other - please specify				
	TOTAL		$390,520.17	
	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	$0.0	
Other - please specify				
	TOTAL		$0.0	
	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

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Te kaunihera o Kirikiriroa

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 14 – Greenhill Park **Development Engineer:**

Documentation	Completed	Date	Notes
General			
GST register for all vested asset (PG L4 and PG L5)	Y	20/5/2021	Attached
Upsize contribution documentation	N/A		
WEL completion certificate	Y	10-5-2021	Attached
Gas completion certificate (where necessary)	Y	7-4-2021	Attached
UFF completion certificate	Y	22-4-2021	Attached
Roading			
Completion Certificate (PS4 or similar)	Y	Various	Similar Attached
Subgrade			
- Stringing or survey of prepared surface (relative shape and height)	Y	3-5-2021	Attached (topo surface)
- Compaction (natural subgrade – Scala, SIL sand-Scala, SIL brown rock – Clegg)	Y	3-5-2021	Attached (Clegg)
Subbase			No subbase aggregate in Stage 14
- Stringing (relative shape and height)	N/A		
- Compaction (clegg)	N/A		
- Nuclear densometer (NDMS)	N/A		
Basecourse			

- Stringing (relative shape and height)	Y	29-4-2021	Attached
- Compaction (clegg)	Y	28-4-2021	Attached
- Nuclear densometer (NDMS)	Y	23-4-2021	Attached
- Benkelman beam test	Y	23-4-2021	Attached
RAMM Pavement	Y	28-4-2021	Attached
RAMM Surfacing	Y	3-5-2021	Attached
Streetlight			
Asbuilt Plan	Y	20/5/2021	Attached
RAMM Streetlight	Y	22/4/2021	Attached
Copy of approved application for new connection	Y	10/3/2021	Attached
Producer Statement	Y	20/05/2021	Attached
CoC or ESC signed by authorised person	Y	20/05/2021	Attached
Asbuilt in format approved by WEL	Y	10/5/2021	Attached
Confirmation of practical completion or 224c sign off	Y	10/5/2021	Attached
WEL Networks approval sheet (Written confirmation from WEL for the acceptance of all underground cabling and circuitry)	Y	10/5/2021	Attached
Manufacturer's Warranty Documents	Y	4/3/2021	Attached
Road Drainage			
Asbuilt plan (subsoil/catchpit/leads		20/5/2021	Attached
Secondary flow path		20/5/2021	Attached
Signage and Marking Asbuilt Plan		20/5/2021	Attached
Water			
Water as-built plan		20/5/2021	Attached
Data Sheet		20/5/2021	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	7/4/2021		Attached
Wastewater			
Wastewater as-built plan		20/5/2021	Attached
Data sheet		20/5/2021	Attached
DXF (if >2 lots)		N/A	
CCTV investigation	Y	30-4-2021	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		20/5/2021	Attached

Data sheet		20/5/2021	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	30-4-2021	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		Sign off to be supplied from HCC
Bond			
Quote	N/A		
Signed bond form			To be supplied from HCC
Other:	N/A		

APPENDIX 4 iii)

HAMILTON CITY COUNCIL

CERTIFICATE FOR AS-BUILT DRAWINGS

Greenhill Park - Stage 14 ..... **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-14-WW1-Rev AB	Stage 14 Wastewater Asbuilt Plan
21879-M-14-W1 Rev AB	Stage 14 Water Reticulation Asbuilt Plan
21879-M-14-SW1 Rev AB	Stage 14 Stormwater Asbuilt Plan
21879-M-14-RD1-Rev AB	Stage 14 Roading Asbuilt Plan
.....	.....
.....	.....

Barry Pearson

Chartered Professional Engineer/Surveyor

19/5/2021

Date

APPENDIX 9

As Built Drawings

- 21879-M-WW1 Rev AB – Stage 14 Wastewaer Asbuilt Plan
- 21879-M-14-W1 Rev AB – Stage 14 Water Reticulation Asbuilt Plan
- 21879-M-14-SW1 Rev AB – Stage 14 Stormwater Asbuilt Plan
- 21879-M-14-Rev AB – Stage 14 Roading Asbuilt Plan

WASTEWATER MANHOLES COORDINATES

MH ID	DIAMETER	EASTING	NORTHING	LID LEVEL	INVERT OUT	INVERT IN	INVERT IN	INVERT IN
WWMH 18.1	1050	447270.81	702911.14	39.01	37.15	37.22	37.20	
WWMH 19.1	1050	447208.47	702897.45	39.04	37.40	37.45		
WWMH 19.2	1050	447243.41	702810.94	39.35	36.40	36.49	36.45	
WWMH 19A.1	1050	447227.76	702806.07	38.96	36.71	36.82		
WWMH 18.2	1050	447305.55	702830.11	39.02	35.43	35.52	35.52	35.50

WASTEWATER PIPELINES

UPSTREAM MH	DOWNSTREAM MH	PIPE DIA	MATERIAL	CLASS	PIPE LENGTH	PIPE GRADE	UPSTREAM IL	DOWNSTREAM IL
WWMH 18.1	WWMH 18.2	150	uPVC	SN16	88.2	1:54	37.15	35.52
WWMH 19.2	WWMH 18.2	150	uPVC	SN16	65.0	1:74	36.40	35.52
WWMH 19.1	WWMH 19.2	150	uPVC	SN16	93.3	1:98	37.40	36.45
WWMH 19A.1	WWMH 19.2	150	uPVC	SN16	16.4	1:75	36.71	36.49

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LAND DEVELOPMENT & DESIGN SPECIALISTS
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www.sltga.co.nz

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	NP	SRC	BP	05/21
AB	AS-BUILT	NP	SRC	BP	05/21

	NAME	DATE		NAME	DATE
SURVEYED	CK	06/05/21	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 14 WASTEWATER AS-BUILT PLAN

PREPARED FOR

ORIGINAL SCALES @ A3: 1:750
DO NOT SCALE DIMENSIONS

STATUS: PRELIMINARY

DRAWING NO: 21879-M-14-WW1

REVISION: AB

SLUICE VALVE COORDINATES

VALVE ID	EASTING	NORTHING
SV1	447206.68	702887.14
SV2	447230.44	702829.88
SV3	447275.96	702917.96
SV4	447303.93	702850.83
SV5	447317.13	702820.52
SV6	447310.18	702806.30

PEET VALVE COORDINATES

VALVE ID	EASTING	NORTHING
PV1	447218.83	702884.32
PV2	447242.03	702829.76
PV3	447242.58	702828.46
PV4	447293.46	702842.82
PV5	447265.37	702909.88

FIRE HYDRANT COORDINATES

HYDRANT ID	EASTING	NORTHING
FH1	447207.67	702884.13
FH2	447236.21	702805.60
FH3	447276.53	702916.41
FH4	447310.86	702804.57

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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	NP	SRC	BP	05/21
AB	AS-BUILT	NP	SRC	BP	05/21

	NAME	DATE		NAME	DATE
SURVEYED	CK	06/05/21	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 14 WATER AS-BUILT PLAN

PREPARED FOR

Chedworth Properties Limited

ORIGINAL SCALES @ A3: 1:750 DO NOT SCALE DIMENSIONS
STATUS: PRELIMINARY
DRAWING NO: 21879-M-14-W1
REVISION: AB

STORMWATER PIPELINES

UPSTREAM MH	DOWNSTREAM MH	PIPE DIA	MATERIAL	CLASS	PIPE LENGTH	PIPE GRADE	UPSTREAM IL	DOWNSTREAM IL
SWMH 15.1	SWM24118	300	uPVC	SN16	54.2	1:217	37.86	37.61
SWM24122	SWM24123	300	uPVC	SN16	59.5	1:132	37.79	37.34
SWMH 19.1	SWMH 19.4	600	RCRRJ	4	81.0	1:129	37.26	36.63
SWMH 20.1	SWMH 19.1	300	uPVC	SN16	79.8	1:186	37.71	37.28

STORMWATER MANHOLES COORDINATES

MH ID	DIA	EASTING	NORTHING	LID LEVEL	INVERT OUT	INVERT IN	INVERT IN	INVERT IN	INVERT IN
SWMH 15.1	1050	447223.17	702855.53	39.18	37.86	37.93	37.94	37.92	
SWM24118	1050	447203.29	702905.99	38.92	37.57	37.67	37.61	37.80	37.67
SWM24122	1050	447285.34	702880.01	39.26	37.79	37.89	37.90		
SWM24123	1050	447263.96	702935.57	38.81	37.00	37.35	37.34	37.35	
SWMH 19.1	1050	447305.16	702835.08	39.16	37.26	37.28	37.68	37.68	37.28
SWMH 20.1	1050	447229.72	702809.01	39.07	37.71	37.80	37.82		

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NOTES:

1. HCC REF: 011.2018.00006632.001
2. DCP'S CONNECTED TO MANHOLES BY Ø300 uPVC SN16 UNLESS OTHERWISE STATED
3. CP'S CONNECTED TO MANHOLES BY Ø225 DIA uPVC SN16 UNLESS OTHERWISE STATED
4. LOT CONNECTIONS ARE Ø100 FOR SINGLE AND Ø150 FOR DOUBLE UNLESS OTHERWISE STATED
5. 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	NP	SRC	BP	05/21
AB	AS-BUILT	NP	SRC	BP	05/21

	NAME	DATE		NAME	DATE
SURVEYED	CK	06/05/21	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 14 STORMWATER AS-BUILT PLAN

PREPARED FOR

Chedworth Properties Limited
GREENHILL PARK

ORIGINAL SCALES @ A3: 1:750 DO NOT SCALE DIMENSIONS
STATUS: PRELIMINARY
DRAWING NO: 21879-M-14-SW1
REVISION: AB

\\slc-fp1\data\0000 - H Drive\mparkinson\Autocad\21879-M-14 - CADM - Stage 14 As-built Plans - Autocad\21879-M-14 - CADM - Stage 14 As-built Plans.dwg - Plotted: 21/05/2021

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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
RAISED CONCRETE

STREETLIGHT COORDINATES

NAME	EASTING	NORTHING
SL123	447268.09	702909.93
SL124	447290.88	702874.33
SL125	447215.74	702865.73
SL126	447296.55	702841.92
SL127	447314.76	702840.02
SL128	447296.65	702825.29
SL129	447313.24	702823.72
SL130	447233.65	702823.31
SL131	447251.53	702818.94
SL132	447235.43	702805.51

Rev	DESCRIPTION	DRN	CKD	APP	DATE
0	PRELIMINARY	NP	SRC	BP	05/21
AB	AS-BUILT	NP	SRC	BP	05/21

	NAME	DATE		NAME	DATE
SURVEYED	CK	06/05/21	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 14
ROADING
AS-BUILT PLAN

PREPARED FOR

Chedworth Properties Limited
GREENHILL PARK

ORIGINAL SCALES @ A3: 1:750
DO NOT SCALE DIMENSIONS

STATUS: PRELIMINARY

DRAWING NO: 21879-M-14-R1

REVISION: AB

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**

WATER HYDRANTS

Form Version 1 - July 2017

Developer/Contractor: Chedworth Properties Ltd / Online Contractors **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** May-21

Stage: Stage 14

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-14-W1	FH1	RM2	LOT 380	OGILVIE	AVENUE	150	BERM	447207.67	702884.13	N	Feb-21	$2,557	
21879-M-14-W1	FH2	RM3	LOT 406	KIBBLEWHITE	ROAD	150	BERM	447236.21	702805.60	N	Feb-21	$2,557	
21879-M-14-W1	FH3	RM8	LOT 396	GUILLAUME	STREET	150	BERM	447276.53	702916.41	N	Feb-21	$2,557	
21879-M-14-W1	FH4	RM4	LOT 363 DP 558430	GUILLAUME	STREET	150	BERM	447310.86	702804.57	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 14

Prepared by: S & L

Date: May-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-14-W1	RM1	150	15.1	1.2	PVC-M PN12	RRJ	N	Feb-21	$393	
21879-M-14-W1	RM2	150	62.0	1.2	PVC-M PN12	RRJ	N	Feb-21	$1,612	
21879-M-14-W1	RM3	150	125.5	1.2	PVC-M PN12	RRJ	N	Feb-21	$3,263	
21879-M-14-W1	RM4	150	40.9	1.2	PVC-M PN12	RRJ	N	Feb-21	$1,063	
21879-M-14-W1	RM5	150	52.9	1.2	PVC-M PN12	RRJ	N	Feb-21	$1,375	
21879-M-14-W1	RM6	150	35.3	1.2	PVC-M PN12	RRJ	N	Feb-21	$918	
21879-M-14-W1	RM7	150	29.9	1.2	PVC-M PN12	RRJ	N	Feb-21	$777	
21879-M-14-W1	RM8	150	72.7	1.2	PVC-M PN12	RRJ	N	Feb-21	$1,890	
21879-M-14-W1	RM9	150	8.8	1.2	PVC-M PN12	RRJ	N	Feb-21	$229	
21879-M-14-W1	RM10	63	21.6	1.2	PE80 SDR11 PN12.5	RRJ	N	Feb-21	$335	
21879-M-14-W1	RM11	63	59.1	1.2	PE80 SDR11 PN12.5	RRJ	N	Feb-21	$916	
21879-M-14-W1	RM12	63	12.1	1.2	PE80 SDR11 PN12.5	RRJ	N	Feb-21	$188	
21879-M-14-W1	RM13	63	64.0	1.2	PE80 SDR11 PN12.5	RRJ	N	Feb-21	$992	
21879-M-14-W1	RM14	63	85.6	1.2	PE80 SDR11 PN12.6	RRJ	N	Feb-21	$1,327	
21879-M-14-W1	RM15	63	12.5	1.2	PE80 SDR11 PN12.7	RRJ	N	Feb-21	$194	
21879-M-14-W1	RM16	63	51.3	1.2	PE80 SDR11 PN12.7	RRJ	N	Feb-21	$795	

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 14

Prepared by: S & L

Date: May-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
21879-M-14-W1	RM8	LOT 328	GUILLAUME	STREET	BERM	25	1.3	MDPE	447299.34	702862.82	1.9 LB	N	N	May-21	$705	
21879-M-14-W1	RM16	LOT 375	KIBBLEWHITE	ROAD	BERM	25	0.1	MDPE	447215.04	702813.28	3.0 RB	N	N	May-21	$705	
21879-M-14-W1	RM3	LOT 376	OGILVIE	AVENUE	BERM	25	0.5	MDPE	447232.49	702824.05	4.4 LB	N	N	May-21	$705	
21879-M-14-W1	RM2	LOT 377	OGILVIE	AVENUE	BERM	25	0.4	MDPE	447218.80	702855.20	1.4 RB	N	N	May-21	$705	
21879-M-14-W1	RM2	LOT 378	OGILVIE	AVENUE	BERM	25	0.5	MDPE	447214.24	702865.94	0.7 RB	N	N	May-21	$705	
21879-M-14-W1	RM2	LOT 379	OGILVIE	AVENUE	BERM	25	0.6	MDPE	447210.59	702875.23	1.3 RB	N	N	May-21	$705	
21879-M-14-W1	RM2	LOT 380	OGILVIE	AVENUE	BERM	25	0.6	MDPE	447206.86	702884.77	1.6 RB	N	N	May-21	$705	
21879-M-14-W1	RM1	LOT 381	OGILVIE	AVENUE	BERM	25	0.5	MDPE	447205.81	702887.84	1.7 LB	N	N	May-21	$705	
21879-M-14-W1	RM1	LOT 382	OGILVIE	AVENUE	BERM	25	0.7	MDPE	447202.41	702896.80	0.7 LB	N	N	May-21	$705	
21879-M-14-W1	RM10	LOT 383	OGILVIE	AVENUE	BERM	25	0.7	MDPE	447212.27	702904.40	0.4 LB	N	N	May-21	$705	
21879-M-14-W1	RM10	LOT 384	OGILVIE	AVENUE	BERM	25	1.0	MDPE	447216.55	702892.92	0.7 LB	N	N	May-21	$705	
21879-M-14-W1	RM11	LOT 385	OGILVIE	AVENUE	BERM	25	0.5	MDPE	447222.42	702877.63	0.7 LB	N	N	May-21	$705	
21879-M-14-W1	RM11	LOT 386	OGILVIE	AVENUE	BERM	25	0.7	MDPE	447226.98	702866.88	0.4 LB	N	N	May-21	$705	
21879-M-14-W1	RM11	LOT 387	OGILVIE	AVENUE	BERM	25	0.6	MDPE	447231.75	702855.23	0.8 LB	N	N	May-21	$705	
21879-M-14-W1	RM13	LOT 388	OGILVIE	AVENUE	BERM	25	0.7	MDPE	447244.07	702826.71	6.0 RB	N	N	May-21	$705	
21879-M-14-W1	RM13	LOT 389	KIBBLEWHITE	ROAD	BERM	25	0.7	MDPE	447262.80	702825.78	-0.4 LB	N	N	May-21	$705	
21879-M-14-W1	RM14	LOT 390	GUILLAUME	STREET	BERM	25	0.6	MDPE	447291.65	702845.12	8.6 LB	N	N	May-21	$705	
21879-M-14-W1	RM14	LOT 391	GUILLAUME	STREET	BERM	25	0.9	MDPE	447280.27	702871.13	1.7 RB	N	N	May-21	$705	
21879-M-14-W1	RM14	LOT 392	GUILLAUME	STREET	BERM	25	0.8	MDPE	447275.62	702882.58	1.4 RB	N	N	May-21	$705	
21879-M-14-W1	RM14	LOT 393	GUILLAUME	STREET	BERM	25	0.9	MDPE	447270.83	702894.40	0.7 RB	N	N	May-21	$705	

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 14

Prepared by: S & L

Date: May-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
21879-M-14-W1	RM14	LOT 394	GUILLAUME	STREET	BERM	25	0.8	MDPE	447265.88	702907.47	2.6 RB	N	N	May-21	$705	
21879-M-14-W1	RM15	LOT 395	GUILLAUME	STREET	BERM	25	0.6	MDPE	447261.14	702919.92	1.4 RB	N	N	May-21	$705	
21879-M-14-W1	RM9	LOT 396	GUILLAUME	STREET	BERM	25	0.8	MDPE	447273.66	702925.91	0.6 LB	N	N	May-21	$705	
21879-M-14-W1	RM8	LOT 397	GUILLAUME	STREET	BERM	25	1.7	MDPE	447279.63	702910.11	3.9 LB	N	N	May-21	$705	
21879-M-14-W1	RM8	LOT 398	GUILLAUME	STREET	BERM	25	0.6	MDPE	447283.66	702900.47	0.9 LB	N	N	May-21	$705	
21879-M-14-W1	RM8	LOT 399	GUILLAUME	STREET	BERM	25	1.8	MDPE	447290.31	702884.26	2.6 LB	N	N	May-21	$705	
21879-M-14-W1	RM8	LOT 400	GUILLAUME	STREET	BERM	25	0.7	MDPE	447294.38	702874.60	1.1 LB	N	N	May-21	$705	
21879-M-14-W1	RM6	LOT 401	GOSSET	AVENUE	BERM	25	0.8	MDPE	447318.61	702830.97	4.1RB	N	N	May-21	$705	
21879-M-14-W1	RM3	LOT 402	KIBBLEWHITE	ROAD	BERM	25	1.1	MDPE	447278.00	702817.90	2.3 RB	N	N	May-21	$705	
21879-M-14-W1	RM3	LOT 403	KIBBLEWHITE	ROAD	BERM	25	0.9	MDPE	447264.51	702813.58	1.7 RB	N	N	May-21	$705	
21879-M-14-W1	RM3	LOT 404	KIBBLEWHITE	ROAD	BERM	25	0.7	MDPE	447251.17	702809.44	1.4 RB	N	N	May-21	$705	
21879-M-14-W1	RM3	LOT 405	KIBBLEWHITE	ROAD	BERM	25	0.7	MDPE	447238.15	702805.43	1.4 RB	N	N	May-21	$705	
21879-M-14-W1	RM3	LOT 406	KIBBLEWHITE	ROAD	BERM	25	0.8	MDPE	447236.12	702804.84	0.7 LB	N	N	May-21	$705	
21879-M-14-W1	RM7	LOT 407 LT 560839	GOSSET	AVENUE	BERM	25	1.4	MDPE	447328.49	702849.50	2.3 LB	N	N	May-21	$705	
21879-M-14-W1	RM 4	LOT 362 DP 558430	GUILLAUME	STREET	BERM	25	1.1	MDPE	447312.71	702795.98	1.2 RB	N	N	May-21	$705	
21879-M-14-W1	RM 3	LOT 363 DP 558430	GUILLAUME	STREET	BERM	25	0.9	MDPE	447309.07	702806.48	2.1 RB	N	N	May-21	$705	
21879-M-14-W1	RM 5	LOT 364 DP 558430	GUILLAUME	STREET	BERM	25	1.1	MDPE	447322.31	702812.16	1.3 LB	N	N	May-21	$705	
21879-M-14-W1	RM 5	LOT 365 DP 558430	GUILLAUME	STREET	BERM	25	1.0	MDPE	447327.75	702801.33	1.4 LB	N	N	May-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 **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** May-21

Stage: Stage 14

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-14-W1	SV1	RM1	LOT 381	OGILVIE	AVENUE	150	HAWLE	447206.68	702887.14	N	Feb-21	$2,200	
21879-M-14-W1	SV2	RM2	LOT 376	OGILVIE	AVENUE	150	HAWLE	447230.44	702829.88	N	Feb-21	$2,200	
21879-M-14-W1	SV3	RM9	LOT 396	GUILLAUME	STREET	150	HAWLE	447275.96	702917.96	N	Feb-21	$2,200	
21879-M-14-W1	SV4	RM8	LOT 328	GUILLAUME	STREET	150	HAWLE	447303.93	702850.83	N	Feb-21	$2,200	
21879-M-14-W1	SV5	RM6	LOT 401	GUILLAUME	STREET	150	HAWLE	447317.13	702820.52	N	Feb-21	$2,200	
21879-M-14-W1	SV6	RM4	LOT 363 DP 558430	GUILLAUME	STREET	150	HAWLE	447310.18	702806.30	N	Feb-21	$2,200	
21879-M-14-W1	PV1	RM10	LOT 384	OGILVIE	AVENUE	63	HAWLE	447218.83	702884.32	N	Feb-21	$930	
21879-M-14-W1	PV2	RM11	LOT 388	OGILVIE	AVENUE	63	HAWLE	447242.03	702829.76	N	Feb-21	$930	
21879-M-14-W1	PV3	RM13	LOT 388	OGILVIE	AVENUE	63	HAWLE	447242.58	702828.46	N	Feb-21	$930	
21879-M-14-W1	PV4	RM14	LOT 390	GUILLAUME	STREET	63	HAWLE	447293.46	702842.82	N	Feb-21	$930	
21879-M-14-W1	PV5	RM15	LOT 394	GUILLAUME	STREET	63	HAWLE	447265.37	702909.88	N	Feb-21	$930	

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:** May-21

Stage: Stage 14

(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-14-WW1	WWMH 18.1	LOT 397	GUILLAUME	STREET	39.01	37.15	1050	447270.81	702911.14	N	Nov-20	$2,448	
21879-M-14-WW1	WWMH 19.1	LOT 383	OGILVIE	AVENUE	39.04	37.40	1050	447208.47	702897.45	N	Nov-20	$2,448	
21879-M-14-WW1	WWMH 19.2	LOT 405	KIBBLEWHITE	ROAD	39.35	36.40	1050	447243.41	702810.94	N	Nov-20	$4,081	
21879-M-14-WW1	WWMH 19A.1	LOT 406	KIBBLEWHITE	ROAD	38.96	36.71	1050	447227.76	702806.07	N	Nov-20	$2,448	
21879-M-14-WW1	WWMH 18.2	LOT 402	GUILLAUME	STREET	38.91	35.43	1050	447305.55	702830.11	E	Nov-20	N/A	EXISTING MH FROM STAGE 13 (S&L Ref WWMH 18.2)

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 **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** May-21

Stage: Stage 14

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-14-WW1	WWMH 18.1	WWMH 18.2	GUILLAUME	STREET	ROADWAY	150	88.2	uPVC SN16	RR	37.15	35.52	N	Nov-20	$21,344	
21879-M-14-WW1	WWMH 19.2	WWMH 18.2	KIBBLEWHITE	ROAD	ROADWAY	150	65.0	uPVC SN16	RR	36.40	35.52	N	Nov-20	$15,730	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	OGILVIE	AVENUE	ROADWAY	150	93.3	uPVC SN16	RR	37.40	36.45	N	Nov-20	$17,447	
21879-M-14-WW1	WWMH 19A.1	WWMH 19.2	KIBBLEWHITE	ROAD	ROADWAY	150	16.4	uPVC SN16	RR	36.71	36.49	N	Nov-20	$3,067	

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 **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** May-21

Stage: Stage 14

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-14-WW1	WWMH 18.1	WWMH 18.2	LOT 328	GUILLAUME	STREET	BERM	100	8.7	uPVC SN16	1.2	447300.54	702863.92	1.4 LB	1.0 FB	N	Nov-20	$459	
21879-M-14-WW1	-	WWMH 19A.1	LOT 375	KIBBLEWHITE	ROAD	BERM	100	15.0	uPVC SN16	1.2	447215.60	702814.98	2.0 RB	0.9 FB	N	Nov-20	$792	
21879-M-14-WW1	-	WWMH 19A.1	LOT 376	KIBBLEWHITE	ROAD	BERM	100	5.0	uPVC SN16	1.2	447218.64	702816.72	1.5 LB	1.6 FB	N	Nov-20	$264	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 377	OGILVIE	AVENUE	BERM	100	4.0	uPVC SN16	1.2	447217.12	702854.20	1.7 RB	1.4 FB	N	Nov-20	$211	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 378	OGILVIE	AVENUE	BERM	100	8.1	uPVC SN16	1.2	447216.38	702857.19	1.3 LB	0.9 FB	N	Nov-20	$428	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 379	OGILVIE	AVENUE	BERM	100	4.1	uPVC SN16	1.2	447208.25	702874.30	1.5 RB	2.1 FB	N	Nov-20	$216	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 380	OGILVIE	AVENUE	BERM	100	9.0	uPVC SN16	1.2	447207.83	702876.90	1.1 LB	1.5 FB	N	Nov-20	$475	
21879-M-14-WW1	-	WWMH 19.1	LOT 381	OGILVIE	AVENUE	BERM	100	7.4	uPVC SN16	1.2	447201.56	702894.80	1.0 RB	1.0 FB	N	Nov-20	$391	
21879-M-14-WW1	-	WWMH 19.1	LOT 382	OGILVIE	AVENUE	BERM	100	4.6	uPVC SN16	1.2	447200.29	702898.06	2.5 LB	1.0 FB	N	Nov-20	$243	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 383	OGILVIE	AVENUE	BERM	100	5.1	uPVC SN16	1.2	447216.64	702896.33	2.5 RB	0.7 FB	N	Nov-20	$269	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 384	OGILVIE	AVENUE	BERM	100	7.7	uPVC SN16	1.2	447218.65	702892.99	1.3 LB	1.4 FB	N	Nov-20	$407	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 385	OGILVIE	AVENUE	BERM	100	4.0	uPVC SN16	1.2	447227.20	702869.54	2.0 RB	0..8 FB	N	Nov-20	$211	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 386	OGILVIE	AVENUE	BERM	100	7.5	uPVC SN16	1.2	447228.75	702867.16	0.8 LB	1.3 FB	N	Nov-20	$396	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 387	OGILVIE	AVENUE	BERM	100	4.1	uPVC SN16	1.2	447237.48	702846.28	1.7 RB	1.3 FB	N	Nov-20	$216	
21879-M-14-WW1	WWMH 19.1	WWMH 19.2	LOT 388	OGILVIE	AVENUE	BERM	100	8.0	uPVC SN16	1.2	447238.64	702843.99	0.9 LB	1.5 FB	N	Nov-20	$422	
21879-M-14-WW1	WWMH 19.2	WWMH 18.2	LOT 389	KIBBLEWHITE	ROAD	BERM	100	5.2	uPVC SN16	1.2	447274.88	702831.22	1.1 RB	1.0 FB	N	Nov-20	$275	
21879-M-14-WW1	WWMH 19.2	WWMH 18.2	LOT 390	KIBBLEWHITE	ROAD	BERM	100	10.9	uPVC SN16	1.2	447277.57	702832.86	1.9 LB	1.7 FB	N	Nov-20	$576	
21879-M-14-WW1	WWMH 18.1	WWMH 18.2	LOT 391	GUILLAUME	STREET	BERM	100	8.5	uPVC SN16	1.2	447282.85	702861.48	2.2 LB	1.1 FB	N	Nov-20	$449	
21879-M-14-WW1	WWMH 18.1	WWMH 18.2	LOT 392	GUILLAUME	STREET	BERM	100	8.3	uPVC SN16	1.2	447274.08	702882.49	0.9 RB	0.9 FB	N	Nov-20	$438	
21879-M-14-WW1	WWMH 18.1	WWMH 18.2	LOT 393	GUILLAUME	STREET	BERM	100	5.1	uPVC SN16	1.2	447273.01	702884.91	1.8 LB	1.0 FB	N	Nov-20	$269	
21879-M-14-WW1	-	WWMH 18.1	LOT 394	GUILLAUME	STREET	BERM	100	4.1	uPVC SN16	1.2	447264.15	702907.14	2.3 RB	1.1 FB	N	Nov-20	$216	
21879-M-14-WW1	-	WWMH 18.1	LOT 395	GUILLAUME	STREET	BERM	100	8.4	uPVC SN16	1.2	447262.46	702910.16	1.1 LB	1.6 FB	N	Nov-20	$444	
21879-M-14-WW1	-	WWMH 18.1	LOT 396	GUILLAUME	STREET	BERM	100	9.8	uPVC SN16	1.2	447278.98	702916.70	2.4 RB	1.0 FB	N	Nov-20	$517	
21879-M-14-WW1	-	WWMH 18.1	LOT 397	GUILLAUME	STREET	BERM	100	6.1	uPVC SN16	1.2	447280.51	702913.62	1.0 LB	1.4 FB	N	Nov-20	$322	
21879-M-14-WW1	WWMH 18.1	WWMH 18.2	LOT 398	GUILLAUME	STREET	BERM	100	5.1	uPVC SN16	1.2	447289.93	702888.13	1.1 RB	0.8 FB	N	Nov-20	$269	
21879-M-14-WW1	WWMH 18.1	WWMH 18.2	LOT 399	GUILLAUME	STREET	BERM	100	8.9	uPVC SN16	1.2	447291.44	702885.77	1.7 LB	1.2 FB	N	Nov-20	$470	
21879-M-14-WW1	WWMH 18.1	WWMH 18.2	LOT 400	GUILLAUME	STREET	BERM	100	4.6	uPVC SN16	1.2	447299.43	702866.35	1.3 RB	1.0 FB	N	Nov-20	$243	
21879-M-14-WW1	WWMH 18.2	WWMH 18.3	LOT 401	GUILLAUME	STREET	BERM	100	9.6	uPVC SN16	1.2	447323.03	702815.00	1.1 RB	1.5 FB	N	Nov-20	$507	
21879-M-14-WW1	WWMH 18.2	WWMH 18.3	LOT 402	GUILLAUME	STREET	BERM	100	8.4	uPVC SN16	1.2	447306.14	702808.60	0.8 LB	1.4 FB	N	Nov-20	$444	
21879-M-14-WW1	WWMH 19.2	WWMH 18.2	LOT 403	KIBBLEWHITE	ROAD	BERM	100	5.7	uPVC SN16	1.2	447264.88	702811.62	1.4 RB	1.7 FB	N	Nov-20	$301	
21879-M-14-WW1	WWMH 19.2	WWMH 18.2	LOT 404	KIBBLEWHITE	ROAD	BERM	100	5.4	uPVC SN16	1.2	447261.13	702810.93	2.4 LB	1.2 FB	N	Nov-20	$285	
21879-M-14-WW1	WWMH 19A.1	WWMH 19.2	LOT 405	KIBBLEWHITE	ROAD	BERM	100	4.0	uPVC SN16	1.2	447238.96	702803.79	1.6 RB	1.3 FB	N	Nov-20	$211	
21879-M-14-WW1	WWMH 19A.1	WWMH 19.2	LOT 406	KIBBLEWHITE	ROAD	BERM	100	5.3	uPVC SN16	1.2	447236.37	702803.23	1.0 LB	1.1 FB	N	Nov-20	$280	

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:** May-21

Stage: Stage 14

(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-14-SW1	SWMH 15.1	LOT 377	OGILVIE	AVENUE	39.18	37.86	1050	447223.17	702855.53	N	Dec-20	$4,301	
21879-M-14-SW1	SWM24118	LOT 382	OGILVIE	AVENUE	38.92	37.57	1050	447203.29	702905.99	E	Jan-20	N/A	EXISTING MH FROM STAGE 11 (S&L Ref SWMH 15.2)
21879-M-14-SW1	SWM24122	LOT 399	GUILLAUME	STREET	39.26	37.79	1050	447285.34	702880.01	E	Jan-20	N/A	EXISTING MH FROM STAGE 11 (S&L Ref SWMH 16.1)
21879-M-14-SW1	SWM24123	LOT 318 DP 543413	GUILLAUME	STREET	38.81	37.00	1050	447263.96	702935.57	E	Jan-20	N/A	EXISTING MH FROM STAGE 11 (S&L Ref SWMH 16.2)
21879-M-14-SW1	SWMH 19.1	LOT 328	GUILLAUME	STREET	39.16	37.26	1200	447305.16	702835.08	E	Dec-20	N/A	EXISTING MH FROM STAGE 13 (S&L Ref SWMH 19.1)
21879-M-14-SW1	SWMH 20.1	LOT 406	KIBBLEWHITE	ROAD	39.07	37.71	1050	447229.72	702809.01	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:** May-21

Stage: Stage 14

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-14-SW1	SWMH 15.1	SWM24118	OGILVIE	AVENUE	ROADWAY	300	54.2	uPVC	SN16	37.86	37.61	N	Dec-20	$9,756	
21879-M-14-SW1	SWM24122	SWM24123	GUILLAUME	STREET	ROADWAY	300	59.5	uPVC	SN16	37.79	37.34	E	Jan-20	N/A	EXISTING LINE FROM STAGE 11
21879-M-14-SW1	SWMH 19.1	SWMH 19.4	GUILLAUME	STREET	ROADWAY	600	81.0	RC	RR	37.26	36.63	E	Dec-20	N/A	EXISTING LINE FROM STAGE 13
21879-M-14-SW1	SWMH 20.1	SWMH 19.1	KIBBLEWHITE	ROAD	ROADWAY	300	79.8	uPVC	SN16	37.71	37.28	N	Dec-20	$14,364	

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 14
Prepared by: S & L
Date: May-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-14-SW1	SWMH 21.2	SWMH 19.1	LOT 328	GOSSET	ROAD	BERM	100/150	6.1	uPVC SN16	1.2	447324.84	702850.00	0.8 RB	1.4 FB	N	Dec-20	$457	PIPE SIZE: 3.5m = 100mm; 2.6m = 150mm
21879-M-14-SW1	-	SWMH 20.1	LOT 375	KIBBLEWHITE	ROAD	BERM	100/150	15.7	uPVC SN16	1.2	447215.02	702814.46	2.7 RB	0.5 FB	N	Dec-20	$1,289	PIPE SIZE: 6.8m = 100mm; 8.9m = 150mm
21879-M-14-SW1	-	SWMH 20.1	LOT 376	KIBBLEWHITE	ROAD	BERM	100	5.5	uPVC SN16	1.2	447219.52	702817.22	2.4 LB	1.8 FB	N	Dec-20	$290	
21879-M-14-SW1	-	SWMH 15.1	LOT 377	OGILVIE	AVENUE	BERM	100	8.5	uPVC SN16	1.2	447217.91	702848.82	7.1 RB	2.7 FB	N	Dec-20	$888	
21879-M-14-SW1	SWMH 15.1	SWMH 24118	LOT 378	OGILVIE	AVENUE	BERM	100	3.9	uPVC SN16	1.2	447213.14	702864.21	2.0 RB	1.3 FB	N	Dec-20	$206	
21879-M-14-SW1	SWMH 15.1	SWMH 24118	LOT 379	OGILVIE	AVENUE	BERM	100/150	6.7	uPVC SN16	1.2	447211.66	702866.48	0.6 LB	1.8 FB	N	Dec-20	$354	PIPE SIZE: 3.4m = 100mm; 3.3m = 150mm
21879-M-14-SW1	SWMH 15.1	SWMH 24118	LOT 380	OGILVIE	AVENUE	BERM	100	4.3	uPVC SN16	1.2	447205.26	702884.04	1.8 RB	1.3 FB	N	Dec-20	$227	
21879-M-14-SW1	SWMH 15.1	SWMH 24118	LOT 381	OGILVIE	AVENUE	BERM	100/150	6.3	uPVC SN16	1.2	447204.09	702886.80	1.2 LB	1.4 FB	N	Dec-20	$493	PIPE SIZE: 3.2m = 100mm; 3.1m = 150mm
21879-M-14-SW1	-	SWMH 24118	LOT 382	OGILVIE	AVENUE	BERM	100/150	6.2	uPVC SN16	1.2	447197.60	702903.59	1.9 RB	1.7 FB	N	Dec-20	$859	PIPE SIZE: 4.0m = 100mm; 2.2m = 150mm
21879-M-14-SW1	-	SWMH 24118	LOT 383	OGILVIE	AVENUE	BERM	100/150	11.7	uPVC SN16	1.2	447214.54	702902.77	2.7 LB	1.0 FB	N	Dec-20	$897	PIPE SIZE: 6.3m = 100mm; 5.4m = 150mm
21879-M-14-SW1	SWMH 15.1	SWMH 24118	LOT 384	OGILVIE	AVENUE	BERM	100/150	9.5	uPVC SN16	1.2	447223.75	702880.07	1.0 RB	1.5 FB	N	Dec-20	$822	PIPE SIZE: 3.5m = 100mm; 6.0m = 150mm
21879-M-14-SW1	SWMH 15.1	SWMH 24118	LOT 385	OGILVIE	AVENUE	BERM	100	4.6	uPVC SN16	1.2	447224.29	702876.60	2.4 LB	0.7 FB	N	Dec-20	$243	
21879-M-14-SW1	-	SWMH 15.1	LOT 386	OGILVIE	AVENUE	BERM	100	4.8	uPVC SN16	1.2	447233.12	702858.03	1.2 RB	1.8 FB	N	Dec-20	$253	
21879-M-14-SW1	-	SWMH 15.1	LOT 387	OGILVIE	AVENUE	BERM	100/150	10.3	uPVC SN16	1.2	447233.50	702855.04	1.7 LB	1.0 FB	N	Dec-20	$854	PIPE SIZE: 4.3m = 100mm; 6.0m = 150mm
21879-M-14-SW1	SWMH 20.1	SWMH 19.1	LOT 388	KIBBLEWHITE	ROAD	BERM	100	4.6	uPVC SN16	1.2	447261.39	702826.62	1.5 RB	0.7 FB	N	Dec-20	$243	
21879-M-14-SW1	SWMH 20.1	SWMH 19.1	LOT 389	KIBBLEWHITE	ROAD	BERM	100/150	7.0	uPVC SN16	1.2	447263.67	702828.19	1.2 LB	1.5 FB	N	Dec-20	$499	PIPE SIZE: 4.5m = 100mm; 2.5m = 150mm
21879-M-14-SW1	SWMH 20.1	SWMH 19.1	LOT 390	KIBBLEWHITE	ROAD	BERM	100	6.8	uPVC SN16	1.2	447290.00	702837.04	4.2 RB	1.5 FB	N	Dec-20	$711	
21879-M-14-SW1	-	SWMH 24122	LOT 391	GUILLAUME	STREET	BERM	100	7.9	uPVC SN16	1.2	447278.75	702869.77	2.4 RB	1.6 FB	N	Dec-20	$417	
21879-M-14-SW1	-	SWMH 24122	LOT 392	GUILLAUME	STREET	BERM	100/150	10.6	uPVC SN16	1.2	447276.72	702873.85	2.1 LB	1.8 FB	N	Dec-20	$834	PIPE SIZE: 5.3m = 100mm; 5.3m = 150mm
21879-M-14-SW1	SWMH 24122	SWMH 24123	LOT 393	GUILLAUME	STREET	BERM	100	4.3	uPVC SN16	1.2	447270.21	702893.14	1.7 RB	0.6 FB	N	Dec-20	$227	
21879-M-14-SW1	SWMH 24122	SWMH 24123	LOT 394	GUILLAUME	STREET	BERM	100/150	10.1	uPVC SN16	1.2	447268.45	702895.76	1.4 LB	1.2 FB	N	Dec-20	$864	PIPE SIZE: 3.7m = 100mm; 6.4m = 150mm
21879-M-14-SW1	SWMH 24122	SWMH 24123	LOT 395	GUILLAUME	STREET	BERM	100/150	10.4	uPVC SN16	1.2	447259.03	702919.54	1.0 RB	1.5 FB	N	Dec-20	$875	PIPE SIZE: 4.1m = 100mm; 6.3m = 150mm
21879-M-14-SW1	SWMH 24122	SWMH 24123	LOT 396	GUILLAUME	STREET	BERM	100/150	7.8	uPVC SN16	1.2	447275.78	702926.55	0.7 LB	1.5 FB	N	Dec-20	$645	PIPE SIZE: 3.3m = 100mm; 4.5m = 150mm
21879-M-14-SW1	SWMH 24122	SWMH 24123	LOT 397	GUILLAUME	STREET	BERM	100	4.7	uPVC SN16	1.2	447283.37	702904.41	2.9 RB	0.7 FB	N	Dec-20	$248	
21879-M-14-SW1	SWMH 24122	SWMH 24123	LOT 398	GUILLAUME	STREET	BERM	100/150	7.9	uPVC SN16	1.2	447285.50	702901.67	0.4 LB	1.7 FB	N	Dec-20	$603	PIPE SIZE: 4.3m = 100mm; 3.6m = 150mm
21879-M-14-SW1	-	SWMH 24122	LOT 399	GUILLAUME	STREET	BERM	100	4.6	uPVC SN16	1.2	447295.57	702877.23	0.8 RB	1.7 FB	N	Dec-20	$243	
21879-M-14-SW1	-	SWMH 24122	LOT 400	GUILLAUME	STREET	BERM	100/150	12.3	uPVC SN16	1.2	447295.91	702873.77	2.5 LB	0.7 FB	N	Dec-20	$985	PIPE SIZE: 5.8m = 100mm; 6.5m = 150mm
21879-M-14-SW1	SWMH 21.2	SWMH 19.1	LOT 401	GOSSET	ROAD	BERM	100/150	10.2	uPVC SN16	1.2	447338.36	702837.96	0.6 LB	2.0 FB	N	Dec-20	$844	PIPE SIZE: 4.3m = 100mm; 5.9m = 150mm
21879-M-14-SW1	SWMH 20.1	SWMH 19.1	LOT 402	KIBBLEWHITE	ROAD	BERM	100/150	9.1	uPVC SN16	1.2	447277.46	702815.86	1.0 RB	1.4 FB	N	Dec-20	$754	PIPE SIZE: 3.8m = 100mm; 5.3m = 150mm
21879-M-14-SW1	SWMH 20.1	SWMH 19.1	LOT 403	KIBBLEWHITE	ROAD	BERM	100	4.3	uPVC SN16	1.2	447274.53	702815.43	1.9 LB	0.9 FB	N	Dec-20	$232	
21879-M-14-SW1	SWMH 20.1	SWMH 19.1	LOT 404	KIBBLEWHITE	ROAD	BERM	100/150	8.1	uPVC SN16	1.2	447251.38	702807.84	1.0 RB	1.2 FB	N	Dec-20	$655	PIPE SIZE: 3.9m = 100mm; 4.2m = 150mm
21879-M-14-SW1	SWMH 20.1	SWMH 19.1	LOT 405	KIBBLEWHITE	ROAD	BERM	100	4.9	uPVC SN16	1.2	447248.59	702806.92	1.9 LB	1.2 FB	N	Dec-20	$253	
21879-M-14-SW1	-	SWMH 20.1	LOT 406	KIBBLEWHITE	ROAD	BERM	100	9.0	uPVC SN16	1.2	447227.40	702800.35	3.1 RB	1.1 FB	N	Dec-20	$475	

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:** May-21

Stage: Stage 14

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-14-SW1	DCP 112	LOT 361 DP 558430	GUILLAUME	STREET	DOUBLE SUMP	38.30	447324.74	702777.59	N	Dec-20	$2,848	
21879-M-14-SW1	DCP 111	LOT 401	GOSSET	AVENUE	DOUBLE SUMP	38.94	447316.55	702833.93	N	Dec-20	$2,848	
21879-M-14-SW1	CP 110	LOT 402	KIBBLEWHITE	ROAD	SINGLE SUMP	38.88	447298.07	702827.04	N	Dec-20	$2,071	
21879-M-14-SW1	CP 108	LOT 328	GUILLAUME	STREET	SINGLE SUMP	38.97	447303.22	702842.50	N	Dec-20	$2,071	
21879-M-14-SW1	CP 107	LOT 390	GUILLAUME	STREET	SINGLE SUMP	38.95	447298.05	702842.23	N	Dec-20	$2,071	
21879-M-14-SW1	CP 087	LOT 377	OGILVIE	AVENUE	SINGLE SUMP	39.10	447221.82	702854.57	N	Dec-20	$2,071	
21879-M-14-SW1	CP 088	LOT 382	OGILVIE	AVENUE	SINGLE SUMP	38.84	447202.56	702903.52	E	Jan-20	N/A	EXISTING CATCHPIT FROM STAGE 11

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 14
Prepared by: S & L
Date: May-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-14-SW1	DCP 112	SWMH 19.4	LOT 361	GUILLAUME	STREET	ROADWAY	300	9.8	uPVC SN16	36.63	N	Dec-20	$2,274	
21879-M-14-SW1	DCP 111	SWMH 19.4	LOT 401	GUILLAUME	STREET	ROADWAY	300	9.9	uPVC SN16	36.36	N	Dec-20	$2,297	
21879-M-14-SW1	CP 110	SWMH 19.1	LOT 402	KIBBLEWHITE	ROAD	ROADWAY	225	5.8	uPVC SN16	37.28	N	Dec-20	$1,346	
21879-M-14-SW1	CP 108	SWMH 19.1	LOT 328	GUILLAUME	STREET	ROADWAY	225	7.7	uPVC SN16	37.68	N	Dec-20	$1,786	
21879-M-14-SW1	CP 107	SWMH 19.1	LOT 390	GUILLAUME	STREET	ROADWAY	225	10.1	uPVC SN16	37.68	N	Dec-20	$2,343	
21879-M-14-SW1	CP 087	SWMH 15.1	LOT 377	OGILVIE	AVENUE	ROADWAY	225	1.7	uPVC SN16	37.92	N	Dec-20	$394	
21879-M-14-SW1	CP 088	SWM24118	LOT 382	OGILVIE	AVENUE	ROADWAY	225	2.6	uPVC SN16	37.80	E	Jan-20	N/A	EXISTING CATCHPIT FROM STAGE 11

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 **Prepared by:** S & L

Development/Subdivision/Job: Greenhill Park **Date:** May-21

Stage: Stage 14

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-14-SW1	DCP 113	GUILLAUME	STREET	BERM	100	18.2	NOVA	38.25	37.55					N	Dec-20	$928	EXISTING CATCHPIT
21879-M-14-SW1	DCP 111	GOSSET	AVENUE	BERM	100	24.8	NOVA	38.37	38.19					N	Dec-20	$1,265	
21879-M-14-SW1	CP 108	GUILLAUME	STREET	BERM	100	65.0	NOVA	38.52	38.22					N	Dec-20	$3,315	
21879-M-14-SW1	CP 093	GUILLAUME	STREET	BERM	100	53.4	NOVA	38.49	38.00					N	Dec-20	$2,723	EXISTING CATCHPIT
21879-M-14-SW1	CP 110	KIBBLEWHITE	ROAD	BERM	100	62.2	NOVA	38.36	38.13					N	Dec-20	$3,172	
21879-M-14-SW1	CP092	GUILLAUME	STREET	BERM	100	52.6	NOVA	38.48	38.03					N	Dec-20	$2,683	EXISTING CATCHPIT
21879-M-14-SW1	CP 107	KIBBLEWHITE	ROAD	BERM	100	94.0	NOVA	38.81	38.20					N	Dec-20	$4,794	
21879-M-14-SW1	DCP056	KIBBLEWHITE	ROAD	BERM	100	22.2	NOVA	38.58	37.63					N	Dec-20	$1,132	EXISTING CATCHPIT
21879-M-14-SW1	CP 090	OGILVIE	AVENUE	BERM	100	50.2	NOVA	38.56	37.52					N	Dec-20	$2,558	EXISTING CATCHPIT
21879-M-14-SW1	CP 088	OGILVIE	AVENUE	BERM	100	50.2	NOVA	38.37	38.09					N	Dec-20	$2,560	EXISTING CATCHPIT
21879-M-14-SW1	CP 087	OGILVIE	AVENUE	BERM	100	87.5	NOVA	38.83	38.35					N	Dec-20	$4,463	
21879-M-14-SW1	DCP 055	KIBBLEWHITE	ROAD	BERM	100	15.8	NOVA	38.36	37.54					N	Dec-20	$806	EXISTING CATCHPIT
21879-M-14-SW1	DCP 112	GUILLAUME	STREET	BERM	100	51.5	NOVA	38.18	37.55					N	Dec-20	$2,625	