


Appendix F

Technical Memo from Tony Coutts – Services and Engineering Conditions

DEVELOPMENT ENGINEERING ASSESSMENT FOR RESOURCE CONSENT APPLICATION

PART 1: INTERNAL REFERRAL INFORMATION

Comments due by:	13/7/20	Processing Planner:	Todd @Planningworks todd@planningworks.co.nz
Consent number:	SP/0082/20		
Address:	35 Lochiel Road RD 2 Hamilton 3282		
Applicant:	Grass Ventures Limited		
Agent:	Mitchell Daysh Limited		
Property number:	10248		
DE allocated to:	Tony Coutts		
Date of site visit:	13/07/2020		
Assessment undertaken by Engineer:			
Name: Tony Coutts Signed:  Date: 10/11/2020			

This application is for the subdivision of existing Lots 5 DPS 16200 and 2 DP 482423 into four separate proposed Lots and the establishment of manufacturing/warehouse and Office/R&D areas for BBC Technologies.

As shown on the Scheme plan provided by Cogswell dated 05/06/2020 (Council Reference: 10426959, Appendix C, Page 184 of 366), Proposed Lot 1 (4.00ha) will be the main subject of future development, with the new manufacturing/warehouse and Office/R&D areas all contained within the proposed boundaries.

Proposed Lots 2 (1.99) and 3(3.82ha) contain existing dwellings and other facilities such as stables and will not be subject to future development as a result of this consent.

Proposed Lot 4 (240m²) is Subject to Road to Vest requirements and conditions of vestment from New Zealand Transport Agency (NZTA).

All Lots infrastructure components are elaborated further on the infrastructure assessment below.

Infrastructure Assessment:

Earthworks:

Proposed Lot 1 will be subject to future development and as indicated in the construction activities, will have earthworks volumes in the range ~16,000m³ for the building and carpark portions. Earthworks construction management, construction, sediment and erosion control, Stockpiles, Dust, Hours of Work, Reinstatement, Archaeological, Abandoned Works and Travel management plan conditions have been imposed to manage the effects from the earthworks accordingly.

An earthworks completion report condition has been imposed to ensure compliant earthmoving practise have been undertaken to achieve an appropriate building design.

Proposed Lot 4 which will be managed under condition requirements from NZTA

Transportation:

The proposed development will require 258 carparks to facilitate all buildings once fully developed. Carpark design/construction/QA conditions have been imposed to ensure design and construction is undertaken within councils appropriate standards and ensure compliance with relative district plan rules.

Bryan Hudson - WDC Transportation Manager, has provided the relevant technical memo in regard to the overall effects this has to WDC transportation facilities. From Bryans assessment the relevant Lochiel Road upgrade design and construction conditions have been imposed to best reflect the commentary with the technical memo, and ensure that the effects of the development are appropriately mitigated.

Proposed Lot 2 will continue to gain access via existing arrangement along Lochiel Road. The entrance is fit for purpose and is not subject to future development at such time of this consent. As such, no further conditions are imposed concerning this property access.

Proposed Lot 3 will continue to gain access via existing arrangement along Airport Road (SH 21). Given the access arrangement is outside Waipa District Councils Jurisdiction given the speed being above 50km/hr (100km/hr in this area), Development Engineering has not assessed this entrance and not past comments on its current condition or purpose. No conditions are imposed regarding access for this property.

Proposed Lot 4 will be Vest to NZTA as road reserve and as such, will be conditioned accordingly by NZTA. NZTA Capture condition has been imposed, highlighting what the agency requirements.

Water Supply:

As identified in the applications servicing information, Proposed Lot 1's potable water demand will be between 8.2 – 12.8m³/day and will require a permanent storage requirement of 180m³ to ensure compliance with SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practise. Given no council reticulation is immediately available for connection or planned to do so and to do so will require approval from 3rd party authorities, Consent Notice for rural fire fighting supply has been imposed with reference to the Technical memo supplied by Harrison Grierson dated 02/03/2020 (*Council Reference: 10426959, Appendix G (Sub-appendix B), Pages 320 – 353 of 366*), Section 4.0 Water Supply.

Proposed Lots 2 – 3 will continue to manage water within their own internal lot boundaries. This subdivision does not alter the current supply arrangements present on these titles.

Proposed Lot 4 doesn't require any water supply to be present given it purpose as road to vest.

Wastewater:

As identified in the applications servicing information, Proposed Lot 1's has various approaches that can be taken to ensure wastewater is managed appropriately. Given the complexity of each proposed arrangement and that no council reticulation is immediately available for connection or planned to do so and will require approval from 3rd party authorities, Consent Notice for wastewater disposal has been

imposed with reference to the Technical memo supplied by Harrison Grierson dated 02/03/2020 (*Council Reference: 10426959, Appendix G (Sub-appendix B), Pages 320 – 353 of 366), Section 3.0 Wastewater.*

Proposed Lots 2 – 3 will continue to manage wastewater within their own internal lot boundaries. This subdivision does not alter the current supply arrangements present on these titles.

Proposed Lot 4 doesn't require any wastewater to be present given its purpose as road to vest.

Stormwater:

The stormwater runoff generated from the building will be most likely reused given the water supply requirements and limited council service available to them in this area at this time. Given the scale and complexity of this arrangement, Consent Notice for stormwater disposal has been imposed. Technical memo supplied by Harrison Grierson dated 02/03/2020 (*Council Reference: 10426959, Appendix G (Sub-appendix B), Pages 320 – 353 of 366)* Section 2.0 Stormwater assessment.

The stormwater runoff generated from the carpark will be managed via soakage capturing the primary event and event exceeding the primary surface running to existing road drains at a controlled predevelopment rate. As identified within the preliminary geotechnical report provided by HDgeo Dated 03/03/2020 (*Council Reference: 10426959, Appendix G, Pages 290 – 360 of 366*) and the soakage tests provided by Harrison Grierson dated 21/01/2020 (*Council Reference: 10426959, Appendix G (Sub-appendix B), Pages 328 – 333 of 366*) soakage is deemed a viable option, with test results exceeding the minimum 1L/m²/min requirements. As such, the report has been added to the advice notes of the carpark conditions stormwater disposal item.

As the proposed road widen/intersection upgrade will create more impervious surfaces therefore more stormwater runoff, stormwater disposal item has been added to the Lochiel Road widen design condition.

Proposed Lots 2 – 3 will continue to manage Stormwater within their own internal lot boundaries. This subdivision does not alter the current supply arrangements present on these titles.

Proposed Lot 4 doesn't require any stormwater condition to be imposed from WDC given its purpose as road to vest to NZTA, which have required stormwater disposal as part of their request.

Foundations:

As identified within the preliminary geotechnical report provided by HDgeo Dated 03/03/2020 (*Council Reference: 10426959, Appendix G, Pages 290 – 360 of 366*) Proposed Lot 1 will require a large amount of soil removal, backfill compaction to remove the loose soil layers identified in the soil strata's. With this requirement, the scale and complexity of the build in mind, Consent Notice for foundation design has been imposed referencing the initial preliminary geotechnical report supplied and that unknown soils that will require testing that are yet to be in place.

Proposed Lots 2 – 3 will not be subject to future development under this application.

Proposed Lot 4 geotechnical requirements will be subject to NZTA approval.

Conditions to be imposed:

1. Earthworks:

Construction Management Plan

Prior to construction activities commencing on site, the consent holder shall provide a finalised Construction Management Plan to Council's Team Leader – Development Engineering for certification. The plan shall include, but is not limited to:

- a) Site management arrangements;
- b) Proposed construction program;
- c) Construction methodologies;
- d) Access, Manoeuvring and parking arrangements;
- e) Approved Traffic Management Plan; and
- f) Hazardous substance management.

Construction

All earthworks shall be carried out in accordance with good engineering practice and shall:

- a) The Construction Management Plan shall be implemented, and all activities shall be undertaken in accordance with the latest version of the Plan.
- b) Be carried out so as to avoid or mitigate any detrimental effect on the environment particularly with regard to the dust, the unnecessary destruction of vegetation, the contamination of natural water or the diversion of surface or ground water flows;
- c) Not result in alteration to the existing landform in such a manner that adjoining properties will be detrimentally affected particularly through changes in drainage systems or abrupt changes in ground level; and
- d) avoid any hazard to persons or property.

Sediment and Erosion Control

The consent holder shall ensure that appropriate erosion and sediment control measures are adopted to minimise any sediment leaving the site and entering any stormwater drains or waterway. The measures shall be implemented and maintained for the full duration of construction works.

Advice Note:

Stormwater Guidelines

Waikato Regional Council's "Erosion & Sediment Control, Guidelines for Soil Disturbing Activities" which can be found at <http://www.waikatoregion.govt.nz>. This guideline is relevant to all construction sites. The design guideline covers cutting tracks, culverts, sediment control measures, such as hay bales, silt fences, detention ponds, earth bunds, guidelines for re-vegetation.

Dust

That as a result of activities authorised by this resource consent, there must be no discharge of dust to air that causes an objectionable or offensive effect beyond the boundary of existing Lots; Lot 2 DP 482423 and Lot 5 DPS 16200 and proposed Lots; 1 - 3. If offensive or objectionable dust emissions do occur beyond the site boundaries, the dust-causing activity shall cease immediately and shall not recommence until appropriate measures have been put in place to prevent recurrence of a similar event.

Advice Note:

Effects Assessment

That, for the purposes of this consent condition, the Waipa District Council will consider an effect that is objectionable or offensive to have occurred if any appropriately experienced officer of the Waipa District Council determines it so after having regard to:

- a) The frequency, intensity, duration, location and effect of the dust emissions, and/or*
- b) Receipt of complaints from neighbours or the public, and/or*
- c) Where relevant written advice from an experienced officer of the Waikato Regional Council or the Waikato District Health Board has been issued.*

Reason:

Condition **Dust** has been imposed to ensure that dust does not create a nuisance and adversely affect the health of residents beyond the boundaries of the site.

Hours of Work

All earthworks and construction works shall be restricted to the hours between 7:00 am to 6:00pm Monday to Friday and on Saturdays 7:30am to 6:00pm. No such work shall occur on Sundays or public holidays.

Reinstatement

All areas of bare earth (no longer required for construction purposes) shall be revegetated or regressed as soon as practicably possible.

Archaeological

In the event of any artefacts or remains being discovered, the applicant will cease work in the area immediately and consult with tangata whenua and other appropriate authorities in accordance with the provisions of the Heritage New Zealand Pouhere Taonga Act 2014. Any artefacts will be removed in accordance with appropriate iwi protocols and any legal requirements of the Heritage New Zealand Pouhere Taonga Act 2014 which shall be implemented prior to work recommencing in the location of the site of the artefacts or remains discovered.

Abandoned Works

If work on site is abandoned or delayed by a period of more than 3 months, adequate preventative and remedial measures shall be undertaken to control sediment discharge, dust and any adverse visual effects and shall thereafter be maintained for so long as necessary. In particular the site shall be covered by a vegetative cover which has obtained a density of more than 80% of a normal pasture sward. All other such measures shall be of a type and to a standard which are to the satisfaction of the Council's Team Leader – Development Engineering.

2. Transportation: External site requirements

NZTA requirements

The subdivision shall proceed in general accordance with the requirements and conditions set out in the letter prepared for --- by The New Zealand Transport Agency entitled --- dated --/--/----. The requirements of this letter include:

- a) Note to Planner: Capture NZTA conditions/comments here**

- b) Written confirmation shall be submitted from the Regional Manager, The New Zealand Transport Agency, Hamilton advising that the works in this condition have been carried out to their satisfaction.

Please note that we cannot include conditions which are referring to other Acts, such as the Road Powers Act etc that NZTA often refer to. Those should be advice notes.

Submit Roading Design Drawings – Lochiel Road widen

The consent holder shall submit Design/construction plans for the Lochiel road widen upgrade. The Design/Construction plans shall be submitted to Council for acceptance prior to carrying out any construction work required by this consent. All work associated with the council road shall be designed to the satisfaction of the Council's Team Leader – Development Engineering, and at the consent holders expense. The submitted plans shall include, but is not limited to:

- a) Pavement design;
- b) Traffic curve analysis
- c) Proposed and existing entrance details;
- d) Longitudinal sections;
- e) Disposal of stormwater including all structures and erosion control;
- f) Common services trench;
- g) Surface treatments; and
- h) Road marking/signage.

Construct Road – Lochiel Road widen

The consent holder shall construct Lochiel Road upgrades per the approved design/construction approved submitted under **Submit Roading Design Drawings – Lochiel Road widen** condition above and to the satisfaction of Council's Team Leader – Development Engineering at the consent holder's expense.

Quality assurance certificates

Following completion of the road areas required under Condition **Construct Road – Lochiel Road widen** above, Quality Assurance Certificates from a suitably qualified and experienced professional shall be completed, signed and submitted to Council's Team Leader – Development Engineering for acceptance.

Roading as-built plans

The consent holder shall provide as-built plans of the council road, relevant quality assurance, and the structures located within the proposed the prior to the issuing of the section 224 certificate, to the satisfaction of Council's Team Leader – Development Engineering.

Maintenance - Lochiel Road widen

Following completion of the road areas required under Condition **Construct Road – Lochiel Road widen** above, The consent holder shall maintain the road until such time the developments building consents completion certificate has been issued by Council and apply second seal coat layer at the consent holder's expense. The consent holder shall supply records that all maintenance has been completed to

the relevant specifications, to the satisfaction of Council's Team Leader – Development Engineering prior to council taking over any maintenance.

Advice Notes:

Road Widen Design

Any work that is required to be carried out shall be in accordance with the Regional Infrastructure and Technical Specification (RITS) and shall be at the consent holders expense.

Approved Contractor

All entrance work within the road corridor shall only be carried out by a Waipa District Council approved Contractor. A Vehicle crossing application will need to be completed. There are not additional application fees associated with this application.

Entrance construction - Traffic management

All contractors or persons undertaking work in the road corridor, for which reinstatement work will be necessary, are required to make a Corridor Access Request (CAR) via the Submitica web site (www.submitica.co.nz). A Traffic Management Plan for the works shall be submitted with the CAR.

Property numbering

Once the section 224C completion certificate has been issued by Council for this subdivision, Council will advise the consent holder of property number(s).

Reasons:

Entrances are required to be accurately numbered in accordance with the Rural and urban addressing standard, AS/NZS4819:2011. To conform to the above standard, the existing property numbering may need to change.

3. Transportation: internal site requirements

Carpark design plans for acceptance and construction

The consent holder shall submit Design/construction plans for the proposed carpark shown on scheme plan LU/0154/20. The Design/Construction plans shall be submitted to Council for acceptance prior to carrying out any construction work required by this consent. All work associated with the Carpark shall be designed, constructed and completed to the satisfaction of the Council's Team Leader – Development Engineering and at the consent holders expense. The submitted plans shall include, but is not limited to:

- a) Pavement design – based on testing of existing ground;
- b) Tracking curve analysis and parking line delineation dimensions
- c) Test results of in-situ ground for the portion of new pavement to be constructed
- d) Disposal of stormwater
- e) Common services trench
- f) Surface treatment
- g) onsite lighting

Advice Notes:

Carpark Design

Any work that is required to be carried out shall be in accordance with the Regional Infrastructure and Technical Specification (RITS) and shall be at the consent holders expense.

Quality assurance certificates

Following completion of the carpark areas required under Condition **Carpark plans for acceptance** above, Quality Assurance Certificates from a suitability qualified and experienced professional shall be completed, signed and submitted to Council's Team Leader – Development Engineering for acceptance.

Proprietary Cell systems Vs Rock lined trenches

Proprietary cell systems offer a far greater option in terms of long term serviceability. They allow for easier ongoing maintenance where systems can be flushed, as opposed rock lined trenches that once filled will require full replacement.

4. Future building site

The following conditions shall be complied with on a continuing basis by the subdividing owner and subsequent owners:

- 4.1** That for subsequent development of Lot 1 a suitably qualified and experienced Engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, design details on the proposed on-site stormwater disposal system.

Reasons: The above condition is required to ensure that stormwater generated from the development on Lot 1 is wholly disposed of on site. The design shall reflect the results outlined in the site suitability report supplied by Harrison Grierson dated 02/03/2020 (Council Reference: 10426959, Appendix G (Sub-appendix B), Pages 320 – 353 of 366) Section 2.0 Stormwater assessment.

Advice Note:

Stormwater Bylaw

All private stormwater infrastructure shall comply with Waipa District Council's Stormwater Bylaw 2019;

Section 7: Protection of Land Drainage Systems – Item 7.5

Section 9: Private Stormwater Systems - All items

Before the deposit of the survey plan the Council shall issue a consent notice pursuant to Section 221 of the Resource Management Act 1991 specifying the above condition.

Such consent notice shall be either prepared or checked at the cost of the subdividing owner by the Council's solicitors and shall be registered against the title to Lot 1.

- 4.2** That for subsequent development of Lot 1 a suitably qualified and experienced Engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, design details on the proposed on-site wastewater disposal system.

Reasons: The above condition is required to ensure that all wastewater generated from development on Lot 1 is wholly disposed of within the new boundaries for this lot. The design shall reflect the results outlined in the site suitability report provided by Harrison Grierson dated 02/03/2020 (Council Reference: 10426959, Appendix G (Sub-appendix B), Pages 320 – 353 of 366), Section 3.0 Wastewater.

Before the deposit of the survey plan the Council shall issue a consent notice pursuant to Section 221 of the Resource Management Act 1991 specifying the above condition.

Such consent notice shall be either prepared or checked at the cost of the subdividing owner by the Council's solicitors and shall be registered against the title to Lot 1.

- 4.3** That for subsequent development of Lot 1 a suitably qualified and experienced Engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, design details on the foundations of the buildings.

Reasons: The above condition is required as the is subject to filled ground, soft soils and removal of existing soil strata as identified in the site suitability report provided by HDgeo Dated 03/03/2020 (Council Reference: 10426959, Appendix G, Pages 290 – 360 of 366).

Before the deposit of the survey plan the Council shall issue a consent notice pursuant to Section 221 of the Resource Management Act 1991 specifying the above condition.

Such consent notice shall be either prepared or checked at the cost of the subdividing owner by the Council's solicitors and shall be registered against the title to Lot 1.

- 4.4** The registered proprietor of Lot 1 shall ensure that any new building (Consent approval date planner to add) supplied with electricity complies with Rule 15.4.2.20(b) of the Waipa District Plan, (access to an adequate water supply for firefighting purposes, where water is not supplied by Council) or any Rule enacted in variation or substitution of that rule.

Reason: It is important that any prospective purchaser of Lot 1 is made aware of this requirement when undertaking building work on Lot 1 Rule 15.4.2.20(b) of the District Plan requires all lots to provide access to an adequate water supply for firefighting purposes where infrastructure services are not provided by Council.

5. Easements

Creation of Right of Way

The Right of Way shown as 'A' on the scheme plan of subdivision SP/0082/20 shall be created and duly granted or reserved.

SECTION 106 – CONSENT AUTHORITY MAY REFUSE SUBDIVISION CONSENT UNDER CERTAIN CIRCUMSTANCES

Section 106 of the Act sets out additional circumstances when a consent authority may refuse to grant subdivision consent or impose conditions in the grant of a subdivision consent, if it considers that there is significant risk from natural hazards or sufficient provision has not been made for access.

In the course of considering whether there is significant risk from natural hazards, the Council has assessed the following matters:

- The likelihood of natural hazards occurring;

Development engineering agrees overall with the assessment on the following hazards identified by HDgeo.

“We have carried out an assessment of natural hazards. As per section 106 of the Resource Management Act, we consider the site to have no significant risk to the following natural hazards:

- *Earthquake: liquefaction or lateral spreading are assessed insignificant to mild (screening assessment below). The general earthquake hazard in the area is low with no active faults nearby.*
- *Tsunami, volcanic, geothermal, or sedimentation activity: the site is not near any known sources of these risks.*
- *Landslips: the site and surrounding area is generally flat, there is no risk of landslips.*
- *Erosion: no indications of erosion were observed during the site investigation and we consider the site to be at low risk of damage due to erosion.*
- *Subsidence: risk of the site to general subsidence is considered low.”*

- The material damage to the land, other land, or structures;

The land, other land, or structures on the land may be subject to material damage by natural hazards such as erosion, falling debris, subsidence, slippage or inundation. Conditions are therefore recommended to address this.

- Any likely subsequent use of the land that would accelerate, worsen or result in material damage to the land, other land, or structures resulting from natural hazards.

The likely subsequent use of the land may accelerate, worsen or result in material damage to the land, other land, or structures resulting from natural hazards. Conditions are therefore recommended to address this.

Council considers that:

Sufficient provision has not been made for legal and physical access to each allotment to be created for the subdivision. Conditions are therefore recommended to address this.

The land containing the proposed subdivision was inspected by Council's Development Engineer prior to the approval of this consent. At the time of approval, the consent authority had reason to set conditions for natural hazards relating to the land as prescribed by Section 106 (1A) of the Act.

S106 – NATURAL HAZARD IDENTIFICATION & RISK MANAGEMENT ASSESSMENT

Natural Hazard <i>means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment</i>	<i>(1A)(a) the likelihood of natural hazards occurring (ie – low, med, high)</i>	<i>(1A)(b) the material damage to land in respect of which the consent is sought, other land, or structures that would result from natural hazards</i>	<i>(1A)(c) any likely subsequent use of the land in respect of which the consent is sought that would accelerate, worsen, or result in material damage of the kind referred to in (b).</i>	<i>(2)(a) Proposed conditions for the purposes of avoiding, remedying, or mitigating the effects</i>
Earthquake	Low	Earth Movement and Structural damage	Low	Earthworks
Tsunami	Low	Structural damage	Low	NIL
Erosion	Low	Minor earth movement	Mod	Earthworks
Volcanic and geothermal activity	Low	Structural damage	Low	NIL
Landslip	Low	Earth movement	Mod	Earthworks
subsidence	Low	Earth movement	Mod	Earthworks
sedimentation	Low	Deposition of soil	Mod	Earthworks
wind	Low	Structural damage	Low	NIL
drought	Low	Soil Shrinkage	Low	NIL
fire	Low	Structural damage	Low	NIL
flooding	Low	Water damage	Mod	Stormwater

S106 – NATURAL HAZARD IDENTIFICATION & RISK MANAGEMENT ASSESSMENT

Other Hazards	Comment:
Stormwater: <ul style="list-style-type: none"> - Overland flow path identified & contained with subject lot? - Potential for impact on neighbouring property? 	Overland flow of existing areas will naturally sheet flow to the existing undulations within their own boundaries or defined natural flow paths. Proposed lot 1 will be managed accordingly through the conditions of consent.
Roading: <ul style="list-style-type: none"> - Access onto property – grade or location difficulty? - Sightlines – visibility, foliage clearance, embankment cutting? - Separation and location issues? - Trees in road reserve/on site – safety issues for road users? - Any national gas/electricity/communications trunk mains within road reserve or development? 	<p>Nil, will be managed through design/construction condition</p> <p>Good sightlines in each direction</p> <p>Nil</p> <p>Nil, screen planting has been removed.</p> <p>Nil</p>
Stock crossing: <ul style="list-style-type: none"> - Stock crossing over road? - Check – signs, hard stand holding, gates, effluent disposal, damage to roads, use of road mat, visibility - Stock underpass – is the effluent disposal/drainage operational? any other issues? 	N/A
Other comments:	