

# **Appendix G**

## QLDC Practice Note



# NEW DEVELOPMENTS WITHIN THE WANAKA AIRPORT DESIGNATION

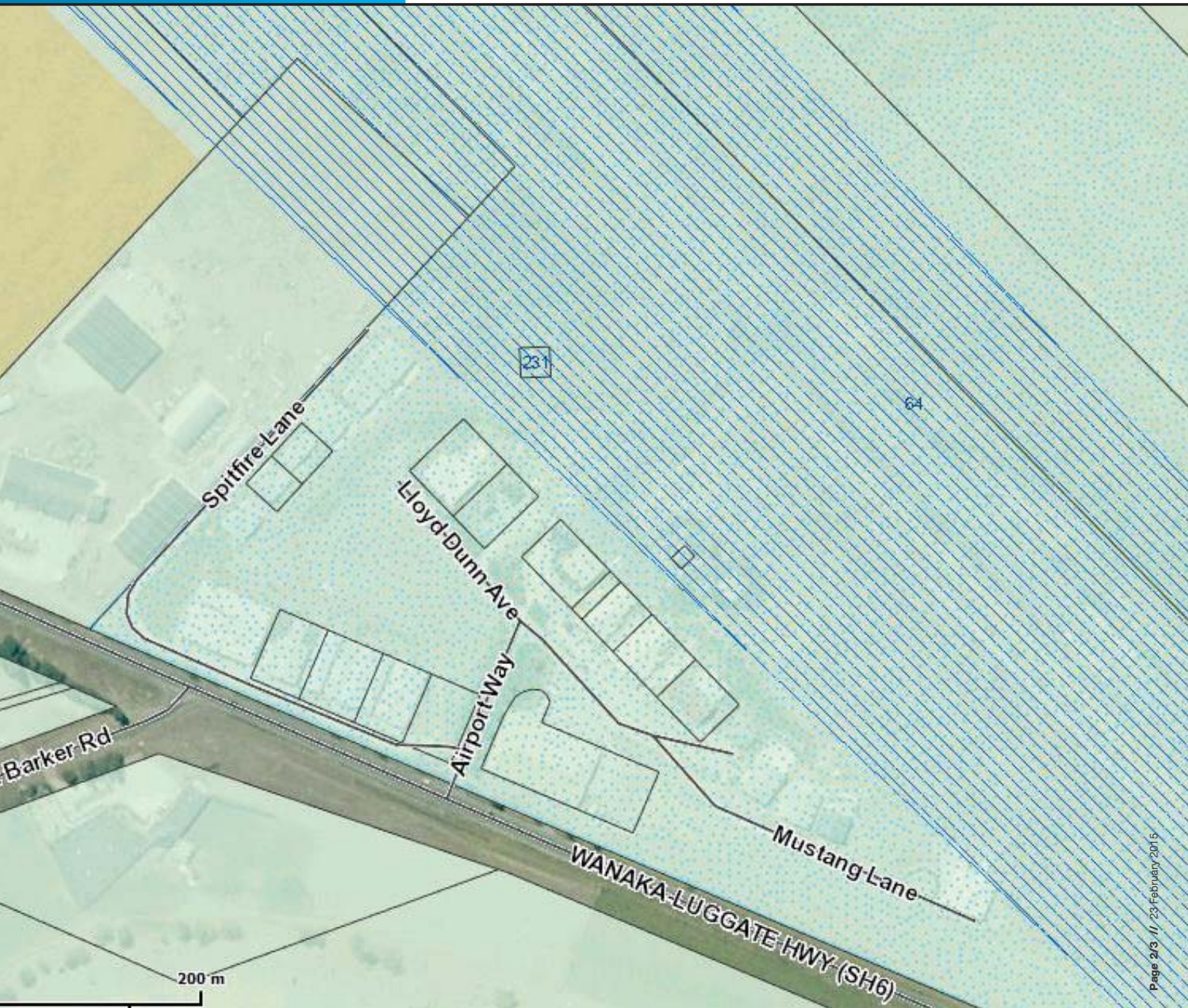


# WANAKA AIRPORT

# BACKGROUND

Wanaka Airport is designated for “Aerodrome Purposes” (D64) under the Council’s Operative District Plan, The requiring authority for this designation is the Queenstown Lakes District Council (QLDC):

Ref No	Map Ref	Authority Responsible	Purpose	Site/Legal Description and Conditions
64	18a	Queenstown Lakes District Council	Aerodrome Purposes	Wanaka Airport. For legal description and conditions refer to E and E1



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## WORKS PROPOSED BY QLDC

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Should any works be proposed within a Designation, the requiring authority (QLDC) is required to apply to the territorial authority (QLDC) for an Outline Plan of the proposed works (refer section 176A of the Resource Management Act 1991 (RMA)).

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## WORKS PROPOSED BY ENTITIES OTHER THAN QLDC

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This Practice Note confirms that individuals who are not part of QLDC who propose to undertake private works, for example extending a privately owned hangar within the Designation, are not able to use the Outline Plan process, and will need to apply for a resource consent with reference to the underlying Rural General zone.

Council's practice is that it will not lend its name to an application to enable use of the Outline Plan process.

The resource consent will be assessed in accordance with the rules of the Rural General Zone. The Council is required to assess the effects of any application against the receiving environment, so recognition will be given to the fact that applications for private airport related works are occurring within an airport environment.

Once the application is lodged, QLDC permission will also be required from the requiring authority under section 176(1)(b) of the RMA. The Council officer processing the resource consent can seek this approval on behalf of a resource consent applicant once an application is received.

**Disclaimer:** The information available in this practice note is for the purpose of providing general information on how the Council may interpret provisions of the Queenstown Lakes District Plan and is provided for the convenience of the public only. Queenstown Lakes District Council accepts no liability for use or misuse of this information.

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## **Appendix H**

### Resource Consent Decisions at Wanaka Airport



**DECISIONS OF THE QUEENSTOWN LAKES DISTRICT COUNCIL**

**NOTIFICATION UNDER s95 AND DETERMINATION UNDER s104**

**RESOURCE MANAGEMENT ACT 1991**

<b>Applicant:</b>	Z Energy Limited
<b>RM reference:</b>	RM150154
<b>Application:</b>	Application under Section 88 of the Resource Management Act 1991 (RMA) for a land use consent to install two new 50,000 litre underground petroleum storage tanks as part of a new refuelling facility, to store hazardous substances, to decommission an existing tank, and to undertake associated earthworks
<b>Location:</b>	Wanaka Airport, Lloyd Dunn Avenue
<b>Legal Description:</b>	Lot 2 Deposited Plan 368240 and Lot 1 Deposited Plan 341605, and Lot 4-5 Deposited Plan 340031 held in Computer Freehold Register 284548 (CONO 984703.2 and 5992299.3 variation 6980126.1 Lot 1 Deposited Plan 18824 held in Computer Freehold Register 176023 Lot 2 Deposited Plan 18824 held in Computer Freehold Register 176024
<b>Zoning:</b>	Designation 64 Wanaka Airport and underlying Rural General Zone
<b>Activity Status:</b>	<b>Discretionary</b>
<b>Decision Date</b>	23 April 2015

**SUMMARY OF DECISIONS**

1. Pursuant to sections 95A-95F of the RMA the application will be processed on a **non-notified** basis given the findings of Section 6.0 of this report. This decision is made by Quinn McIntyre, Senior Planner, on 21 April 2015 under delegated authority pursuant to Section 34A of the RMA.
2. Pursuant to Section 104 of the RMA, consent is **GRANTED SUBJECT TO CONDITIONS** outlined in **Appendix 1** of this decision imposed pursuant to Section 108 of the RMA. The consent only applies if the conditions outlined are met. To reach the decision to grant consent the application was considered (including the full and complete records available in Council's electronic file and responses to any queries) by Quinn McIntyre, Senior Planner, as delegate for the Council.

## 1. PROPOSAL AND SITE DESCRIPTION

Consent is sought to install a new underground petroleum storage system (UPSS); to supply Avgas and Jet A1 fuel, providing dispensing facilities at two locations; to decommission an existing tank; and, to undertake associated earthworks. The proposed fuel facility would be self-service, available for use 24 hours a day.

Signage is also proposed as a regulatory requirement under the Hazardous Substances and New Organisms Code of Practice 2. All signs required to be displayed by any legislation and displayed in accordance with the provisions of that legislation are exempt from signage standards, and as such is a permitted activity in the District Plan.

The applicant has provided a detailed description of the proposal, the site and locality in Sections 1.0 – 3.5.4 of the report entitled “Assessment of Environmental Effects – Wanaka Airport, Retanking Works”, prepared by John McCall of Burton Planning Consultants Limited, and submitted as part of the application (hereon referred to as the applicant’s AEE and attached as Appendix 2). This description is considered accurate and is adopted for the purpose of this report.

A summary of the proposal is as follows:

Four works sites are located on the subject site.

Work Site 1:

- Earthworks including a cut of 3370m<sup>3</sup> (including contingency) over an area of 2596m<sup>2</sup>.
- Installation of two new 50,000 litre tanks (1 x Avgas and 1 x Jet A1 fuel) and associated pipework underground
- Reinstatement of the new tank pit into the hardstand
- Excavation and installation of a new API interceptor
- Sealing the area of works with hardstand, or regrassed
- Installing dispenser islands, sumps, soak hole, vents, and light stand

Work Site 2:

- Long-term stockpiling area for excavated material from Site 1 (should there be no contamination found at works site 1)

Work Site 3:

- Trenching works across taxiway for a Jet A1 fuel line to link Site 3 to new UPSS
- Installation of new Jet A1 fuel dispenser (for private use by Alpine Deer Group)

Work Site 4:

- Earthworks including 120m<sup>3</sup> of soil removal, and backfill of 265.2m<sup>2</sup> (including contingency) using the material from the excavation works from Site 1 (if this is suitable to use).
- Removal of the existing 50,000 litre Avgas UPSS. This will occur approximately one month from when fuel is delivered to the new UPSS at Site 1.

### *Relevant Site History*

The airport has had various land use consents and outline plans granted, mostly for the construction and alteration of hangars on the site or for commercial operations to occur on the site.

## 2. ACTIVITY STATUS

### 2.1 THE DISTRICT PLAN

The subject site is zoned Rural General and the proposed activity requires resource consent for the following reasons:

- A **restricted discretionary** activity pursuant to Rule 5.3.3.4(vi) as the proposal breaches site standard 5.3.5.1(viii)(1) in regard to earthworks exceeding 1000m<sup>3</sup>. It is proposed to undertake earthworks over four areas comprising:

Site 1: 3370m<sup>3</sup> (including contingency) over 2596m<sup>2</sup>  
 Site 2: 3050m<sup>2</sup> fill (relocated from Site 1)  
 Site 3: 140m<sup>3</sup> (trenching – cut of 70m<sup>3</sup> and fill of 70m<sup>3</sup>)  
 Site 4: 120m<sup>3</sup> of excavation and 265.2m<sup>3</sup> backfilling (from Site 1).

Council's discretion is restricted to this matter.

- A **restricted discretionary** activity pursuant to Rule 5.3.3.4(vi) as the proposal breaches site standard 5.3.5.1(viii)(2)(b) in regard to earthworks cuts and batters which shall be laid back such that their angle is no more than 65 degrees. The tank pit will require a vertical cut of 4.5m in depth.
- A **restricted discretionary** activity pursuant to Rule 5.3.3.4(vi) as the proposal breaches site standard 5.3.5.1(viii)(2)(c) in regard to earthworks exceeding the height of fill. It is proposed to stockpile the excavated soil in piles of up to 4 metres in height. The District Plan allows a maximum height of fill up to 2 metres. Council's discretion is restricted to this matter.
- A **discretionary** activity resource consent pursuant to Rule 16.2.2.2(i)(a) for the proposed increase in the storage of hazardous substances which will exceed the permitted thresholds (being 10,000 litres for petroleum). It is proposed to temporarily store 150,000 litres of a hazardous substance. Once the existing storage facility is removed, 100,000 litres will be permanently stored, being 50,000 litres each of Avgas and Jet/A1 fuel.
- A **discretionary** activity resource consent pursuant to Rule 5.3.3.3(v) for the proposed airport activity. The proposed activity intends that the airport be used for the servicing of aircraft.

Overall, the application is considered to be a **discretionary** activity.

## 2.2 NATIONAL ENVIRONMENTAL STANDARD FOR ASSESSING AND MANAGING CONTAMINANTS IN SOIL TO PROTECT HUMAN HEALTH

The proposed activity involves the removal of fuel storage system and associated soil disturbance which will exceed 30m<sup>3</sup>.

- Pursuant to Clause 11 of the NES, (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) 2011, the application requires a **discretionary** consent.

### 3. SECTION 95A NOTIFICATION

The applicant has not requested public notification of the application (s95A(2)(b)).

No rule or national environmental standard requires or precludes public notification of the application (s95A(2)(c)).

The consent authority is not deciding to publicly notify the application using its discretion under s95A(1) and there are no special circumstances that exist in relation to the application that would require public notification (s95A(4)).

A consent authority must publicly notify an application if it decides under s95D that the activity will have or is likely to have adverse effects on the environment that are more than minor (s95A(2)(a)).

An assessment in this respect follows.

### 4. ASSESSMENT OF EFFECTS ON THE ENVIRONMENT (s95D)



#### 4.1 MANDATORY EXCLUSIONS FROM ASSESSMENT (s95D)

A: *Effects on the owners or occupiers of land on which the activity will occur and on adjacent land (s95D(a)).*

B: *Trade competition and the effects of trade competition (s95D(d)).*

C: *The following persons have provided their **written approval** and as such adverse effects on these parties have been disregarded (s95D(e)).*

Person (owner/occupier)	Address (location in respect of subject site)
Ralph Fegan as operations manager of Wanaka Airport and Queenstown Airport Corporation	Wanaka Airport

As Council is the land owner of the site, The CEO, Mr Adam Feeley has also provided approval, as delegated authority for Queenstown Lakes District Council.

#### 4.2 PERMITTED BASELINE (s95D(b))

The consent authority **may** disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect. In this case, the NES controls effects related to assisting and managing contaminants in soil to protect human health. However, with regard to soil disturbance, the District Plan rules require Council to assess the proposed activity against matters beyond the scope of what the NES permits.

In regard to earthworks, the following activities are permitted in the Rural General Zone:

- By volume, up to 300m<sup>3</sup> of earthworks per site in any one consecutive 12 month period
- By area, up to 1000m<sup>2</sup> per site in any one consecutive 12 month period
- All cuts and batters shall be laid back so that the angle is no more than 65 degrees, unless previously determined
- Fill is permitted up to a maximum height of 2m.

In terms of hazardous substances, the following are permitted, provided they comply with the site standards, according to the Hazardous Substances section of the District Plan:

- The use and transportation of hazardous substances
- The storage of hazardous substances in Schedule 1 in quantities that do not exceed those specified in Column A, in the Rural General Zone, which in this case, is up to 10,000 litres of flammable liquid to be stored in underground tanks.

#### 4.3 ASSESSMENT: EFFECTS ON THE ENVIRONMENT

Taking into account sections 4.1 and 4.2 above, the following assessment determines whether the activity will have, or is likely to have, adverse effects on the environment that are more than minor.

The relevant assessment matters are found in Sections 5.4(xvi) – *Airports*, 5.4(xxvii) - *Earthworks* 16.3.2 – *Hazardous Substances* of the District Plan and have been taken into consideration in the assessment below.

Key assessment matters require Council to consider any adverse effects arising as a result of airport activities, earthworks, and the storage of hazardous substances. Specifically, with regard to airports, relevant assessment matters seek to ascertain the convenience to and efficient operation of existing airports, and the visual effect of airport activities.

With regard to the proposed earthworks, the relevant assessment matters direct Council to assess whether appropriate environmental protection measures will be taken, the effects on landscape and

visual amenity values, the effects on adjacent site, general amenity values, any impacts on sites of cultural heritage value, and whether the earthworks are necessary to achieve a reasonable or appropriate use of the land for the proposed activity.

Finally, the relevant assessment matters associated with the storage of hazardous substances, require Council to consider the extent the storage and site poses a risk to the environment, the extent to which undue risk can be avoided or mitigated, the extent the site is accessible to major road networks, the extent site and zone standards of the rural zone can be complied with, and adherence to specific legislation regarding adequate signage.

The Assessment of Effects provided at section 5.0 of the applicant's AEE, is comprehensive, and is therefore adopted in part for the purposes of this report.

The following assessment is also included to address additional matters, and points of difference.

### Airports

The Assessment of Effects provided at section 5.8 of the applicant's AEE, is comprehensive, and is therefore adopted in part for the purposes of this report.

### Earthworks

#### *Environmental Protection Measures*

Z Energy Limited has a prepared Environmental Management Plan (EMP) to be implemented during works on a site. The EMP is included as Appendix 3 of this report. The EMP has an emphasis on works to remove underground petroleum tanks and works that are likely to encounter contaminated soils, and is applicable to earthworks in general. The EMP includes contingencies related to nuisance effects such as noise and dust, and on-site soil management, and perimeter controls for suspended sediment in overland flow.

In terms of environmental protection measures, the accompanying EMP along with appropriate conditions of consent would sufficiently avoid, mitigate or remedy any potential adverse effects on the environment as a result of the earthworks. This is particularly relevant for the environmental management of stockpiles at Work Site 2.

#### *NES*

The Applicant's AEE states that the area of works would be restricted to access only, preventing the public and workers at the airport to enter into the work areas.

In addition, the AEE states that workers are at risk of direct contact with hydrocarbon impacted soils on the site, and that Z Energy has procedures in place for workers to be aware of potential hazards or risks related to exposure to during the disturbance activities. The workers will be required to work in accordance with the Z Energy Permit to Work system, and in accordance with a maintenance/excavation worker plan for areas with potentially hydrocarbon contamination.

- *Work Site 1*

According to Council's consultant Environmental Scientist, Mr Glenn Davis, it is reasonable to consider Work Site 1, not to be a HAIL site, and that the excavation in this location can be undertaken without consideration of the NES. It should be noted however, that the applicant has triggered the excavation in this location as a permitted activity under the NES, and as such have outlined the matters of control to be put into place to minimise exposure to humans from contaminants (in accordance with section 8 of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants to Soil to Protect Human Health ) Regulations 2011). As a precautionary measure therefore, it is required that these controls be undertaken through appropriate conditions of consent.

For monitoring purposes, appropriate conditions of consent are recommended in accordance with the matters of control under the NES, and include, but not limited to: controls to minimise exposure of

humans to contaminants; that the soil be reinstated within one month upon completion of the works; that the soil either used as fill on the subject area or relocated to another area on the site; and that the disturbed area be either regrassed, converted to a hardstand area or otherwise permanently stabilised. Should the excavated soil be found to be contaminated (through visual inspection and presence of odour as stated in the EMP due to the unlikely contamination of this area), the soil will be required under the NES to be disposed of at an authorised facility, and an appropriate condition is recommended to that effect. A condition of consent is also recommended that any engineering works shall be carried out in accordance with Council standards.

- *Work Site 2*

As above, should the excavated soil be contaminated, it is proposed to be disposed of at an authorised facility. A condition of consent is recommended that should this be required, then the disposal be undertaken in accordance with the requirements of the NES.

- *Work Site 3*

It is considered that the NES would not be triggered at this site.

- *Work Site 4*

The applicant has triggered the removal of the existing fuel tanks as a discretionary activity as the soil excavation required will exceed the limit of 90m<sup>3</sup>. In the applicant's opinion, there is no reason to believe that the existing tank has leaked or led to any kind of soil contamination but the activity will be undertaken in accordance with the EMP submitted with the application.

It is considered that the Applicant's EMP is acceptable, and compliance with this management plan can be provided for through appropriate conditions of consent, which are consistent with the NES requirements. In summary, the EMP provides for an appropriate sampling methodology for the excavated material to ensure that contamination has not occurred and if contamination is found, outlines appropriate remediation and disposal methods.

Overall, it is considered that subject to appropriate conditions of consent which require compliance with the applicant's EMP, the proposed activity would have no more than a minor effect on the environment, and that any effects on human health as a result of the proposed works would be appropriately avoided, mitigated, or remedied.

#### *Effects on Landscape and Visual Amenity Values*

The visual quality and amenity of the landscape in this location is dictated by the natural landform in this area which, as expected, is flat and surrounded by a highly modified landform, including built form that typically defines the character of an airport.

The proposed earthworks would be undertaken entirely within the airport. The greatest area of cut is located at Work Site 1, where the existing land would be receded back some 25m, and battered to mimic the existing form. Existing buildings, mostly aircraft hangars, would block the location of work sites 1, 3 and 4 from public views offsite from the south, being the State Highway. The location of the fill to be stock piled in work site 2 would be in an area that is of sufficient distance from the State Highway and also blocked by existing landscaping on the site, and built form, being the aforementioned hangars. Similarly, the proposed trenching toward the Alpine Helicopter Group site, would be entirely screened by the built form that runs parallel with State Highway 6. There are not likely to be any cumulative effects on the natural form of the existing landscape.

The areas of excavated land are to be rehabilitated either through regrassing, sealing, or made into hardstand areas. A condition of consent is recommended that any exposed areas be regrassed or otherwise permanently stabilised within one month of the works being completed. The earthworked areas, are not likely to create an area that would be inconsistent with the surrounding landscape, be that either the landscape and character of the airport itself, or the natural terrace landscape in that location.

Overall, in terms of effects on landscape and visual amenity values, it is considered that the proposed activity would have no more than a minor effect on the environment.

#### *General Amenity Values*

In terms of the amenity of the site, it is considered that under the controls addressed in the EMP, that amenity of the airport would not likely be adversely effected, nor would the proposed activity detract from the amenity of surrounding area.

Overall, it is considered that the proposed earthworks would have no more than a minor effect on the environment.

#### *Impacts on sites of cultural heritage value*

The EMP allows for heritage and landscape protection, however, there is no record that the subject site contains Waahi Tapu or Waahi Toaka, nor is the site recorded as an archaeological site. A condition of consent is recommended that should items of archaeological value be discovered that accidently discovery protocol is adhered to. Subject to the recommended condition, it is considered that the proposed activity would have not more than minor effects on the environment in respect to cultural heritage.

#### Hazardous Substances

As stated above, the transport and use of hazardous substances, provided that they comply with the site standards of the District Plan, is a permitted activity.

It is proposed to store one 50,000 litre tank holding Avgas, and one 50,000 litre tank holding Jet A1 fuel, and for up to one month after this installation, the existing tank will remain in operation, meaning that and additional 50,000 litres of Avgas will be stored on site during this time.

The Applicant's AEE addresses compliance of the proposed storage of hazardous substances, which are to *"...be installed and operated within established legislative requirements, and non-regulatory codes and guidelines, including the Hazardous Substances and New Organisms (HSNO) Act 1996 and associated regulations"*.

The Applicant's AEE states that the proposed storage tanks are double-contained fibre glass tanks manufactured to an Environmental Protection Agency approval, and that *"...standard physical mitigation measures include locating the pumps on concrete islands and the nozzles being fitted with breakaway couplings, which automatically cut off fuel supply in emergencies. This minimises spillage resulting from careless operation or damage to nozzles"*.

The EMP and AEE describe methods to avoid or mitigate any undue risk associated with the storage of hazardous substances.

The location of the tanks is not considered to be in close proximity to people-sensitive activity, or to sensitive natural resources. The people potentially at risk from the site would include the users of the airport, however, the EMP has measures in place to ensure that the works sites be appropriately cordoned off and limited to access for authorised personnel only.

Spill mitigation measures are addressed, and Z Energy have a standard series of site management plans for its refuelling facilities. To reduce the likelihood of a spill, the dispensers at Site 1 will be on raised islands, and will include regulatory safety signage, bollards to reduce the risk of damage to equipment from aircraft or vehicle impact, a light pole, and emergency shut-off valves. In addition, Work Site 3 will have an additional spill kit island between the Avgas and Jet A1 refuelling slabs, which will also comprise bollards, light pole, and signage, and in this case, and emergency shut down button, and hazardous spill kit. Site 3 will comprise a raised island, and safety signage, bollards, fire extinguisher, and emergency shut down button. Capture devices in the form of cesspits will also be built into the slab, designed to drain into sumps.

The existing Z tank will be decommissioned, and there are also existing BP pumps available on the site. While the proposed activity would involve an increase in fuel to be stored and pumps available, due to the appropriate management of these hazardous substances as outlined in the applicant's EMP, it is considered that the cumulative impact of the facilities would be less than minor.

The District Plan requires that any hazardous substances collected for disposal or subsequent use be in containers that seal and contain the hazardous substance. A condition of consent is recommended that any hazardous substance collected for disposal would eventuate from a spill or maintenance procedure and would be collected by maintenance contractors using sealed containers or specialised disposal trucks.

After considering the proposal against the relevant assessment matters and consideration of the application documents, it is considered that with appropriate conditions the proposal would have no more than a minor effect on the environment.

#### 4.4 DECISION: EFFECTS ON THE ENVIRONMENT (s95A(2))

Overall the proposed activity is not likely to have adverse effects on the environment that are more than minor.

### 5.0 EFFECTS ON PERSONS

Section 95B(1) requires a decision whether there are any affected persons (under s95E) in relation to the activity. Section 95E requires that a person is an affected person if the adverse effects of the activity on the person are minor or more than minor (but not less than minor).

#### 5.1 MANDATORY EXCLUSIONS FROM ASSESSMENT (s95E)

A: *The persons outlined in section 4.1 above have provided their **written approval** and as such these persons are not affected parties (s95E(3)(a)).*

#### 5.2 PERMITTED BASELINE (s95E(2)(a))

The consent authority **may** disregard an adverse effect of the activity on a person if a rule or national environmental standard permits an activity with that effect. In this case the permitted baseline is found within section 4.2 above.

#### 5.3 ASSESSMENT: EFFECTS ON PERSONS

Taking into account sections 5.1 and 5.2 above, the following outlines an assessment as to whether the activity will have or is likely to have adverse effects on persons that are minor or more than minor:

<b>Adverse Effects:</b>	<b>Effects on Persons</b>
Amenity	Less than minor
Views and Outlook	Less than minor
Land Stability	Less than minor
Safety	Less than minor

Although the works will occur entirely within the airport complex, there are individual lots within the airport which are all owned by Queenstown Lakes District Council, and leased to private individuals. The site in closest proximity to the location of the earthworks in work area 1 will be Lot 8 DP 22637, a 400m<sup>2</sup> fenced-off site which homes a small weather station comprising a small shed. The top of the earthworks batter will be at least 10m from the closest edge of Lot 8. As such, it is considered that there would be no adverse effects of the stability of the earthworks on this site, or any other sites within the airport.

In terms of effects on amenity, views and outlook, it is considered that the proposed activity would be consistent with the services anticipated to be located within and airport facility, and therefore would have less than a minor effect on persons with that regard.

In terms of safety, it is considered that the proposed activity would be carried out in accordance with the relevant legislative regulations, codes and standards, and as such, any potential effects on persons would be appropriately avoided, remedied or mitigated so that they were less than minor.

In terms of the works overall, the Applicant's AEE describes that the work will be done over a limited time, and the duration of the work can be imposed as a condition of consent. Consideration has been given to users of the taxi way and run way, where some of the works will occur. The works that could most directly affect these users would be where the trenching occurs across the taxi way, and would take place over three days. There is ample space in this location for light aircraft to utilise, thereby avoiding the works in this location. In addition, given the site management in terms of nuisance effects, and the temporary nature of the proposed activity, it is considered that any potential adverse effects on persons would be less than minor.

Overall, it is considered that the proposed activity would have less than a minor effect on persons.

#### **5.4 DECISION: EFFECTS ON PERSONS (s95B(1))**

In terms of Section 95E of the RMA, no person is considered to be adversely affected.

### **6.0 OVERALL NOTIFICATION DETERMINATION**

Given the decisions made above in sections 4.4 and 5.4 the application is to be processed on a non-notified basis.

### **7.0 S104 ASSESSMENT**

#### **7.1 EFFECTS (s104(1)(a))**

Actual and potential effects on the environment have been outlined in section 4 of this report. Conditions of consent can be imposed under s108 of the RMA as required to avoid, remedy or mitigate adverse effects.

#### **7.2 RELEVANT DISTRICT PLAN PROVISIONS (s104(1)(b)(vi))**

The relevant objectives and policies are contained within Part 5 - *Rural Areas* and 16 – *Hazardous Substances* of the District Plan.

##### Section 5 Rural Areas

#### **Objective 1 - Character and Landscape Value**

***To protect the character and landscape value of the rural area by promoting sustainable management of natural and physical resources and the control of adverse effects caused through inappropriate activities.***

##### ***Policies:***

*1.1 Consider fully the district wide landscape objectives and policies when considering subdivision, use and development in the Rural General Zone.*

*1.2 Allow for the establishment of a range of activities, which utilise the soil resource of the rural area in a sustainable manner.*

*1.3 Ensure land with potential value for rural productive activities is not compromised by the inappropriate location of other developments and buildings.*

*1.4 Ensure activities not based on the rural resources of the area occur only where the character of the rural area will not be adversely impacted.*

*1.6 Avoid, remedy or mitigate adverse effects of development on the landscape values of the District.*

*1.7 Preserve the visual coherence of the landscape by ensuring all structures are to be located in areas with the potential to absorb change.*

It is considered that although the subject site is zoned rural general, that the amenity of the site is defined by the nature and character of the airport itself. Therefore, it is considered that the proposed activity, being confined to within the airport designation, would be readily absorbed into the site, thereby preserving the visual coherence of the landscape.

### **Objective 3 - Rural Amenity**

***Avoiding, remedying or mitigating adverse effects of activities on rural amenity.***

#### **Policies:**

*3.1 Recognise permitted activities in rural areas may result in effects such as noise, dust and traffic generation, which will be noticeable to residents in the rural areas.*

*3.2 Ensure a wide range of rural land uses and land management practices can be undertaken in the rural areas without increased potential for the loss of rural amenity values.*

*3.3 To avoid, remedy or mitigate adverse effects of activities located in rural areas.*

It is considered that although the subject site is zoned rural general, that the amenity of the site is defined by the nature and character of the airport itself. As such, it is considered that there would be no loss of rural amenity values, and that any adverse effects of the proposed activity would be avoided, remedied or mitigated.

Overall, it is considered that the proposed activity would be consistent with the relevant objectives and policies of the Rural Areas section of the District Plan.

### **Section 16 Hazardous Substances**

#### **Objective**

***To avoid, remedy or mitigate the adverse environmental effects arising from the use of land for the use, storage, transportation, manufacture, and disposal of hazardous substances.***

#### **Policies:**

*1 To avoid, remedy or mitigate adverse environmental effects due to accidental spillages of hazardous substances or poor management practices.*

*2 To promote the efficient management of the use, storage, transportation, manufacture, and disposal of hazardous substances through a coordinated approach between agencies responsible for the management of hazardous substances.*

*3 To avoid, remedy or mitigate the potential for adverse effects to the environment from the use of land for the manufacture, storage and use of hazardous substances, recognising that the quantities of hazardous substances, which are acceptable in different areas of the District, will vary depending on the proximity of residential use, on community expectation, and the sensitivity of the surrounding environment.*

*4 To ensure adverse effects on the environment from a hazardous substance spillage are, where possible, avoided, remedied or mitigated.*

*5 To promote public awareness about the potential adverse environmental effects which may arise through the use, storage, transportation, manufacture, and disposal of hazardous substances.*

6 To promote the disposal of hazardous substances at facilities that are designed for their safe disposal.

7 To ensure any adverse effects on the environment from disposal into any reticulated sewers is avoided or remedied.

It is considered that as Z Energy complies with relevant regulations, Codes of Practice and Standards, that the proposed activity would sufficiently avoid, remedy or mitigate any potential adverse environmental effects, and that appropriate contingency and emergency procedures are outlined within the applicant's EMP. As such, it is considered that the proposed activity would be consistent with the relevant objectives and policies within the Hazardous Substance Section of the District Plan.

## **OTHER MATTERS – NES**

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations (2011) does not have any objectives and policies. However, the policy objective stated in the discussion document for the proposed NES is "...[t]o ensure that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make the land safe for human use".

Compliance with the appropriate documents and management plans, and subject to the recommended conditions of consent, would ensure that risk to human health would be avoided or mitigated. Provided the proposal proceeds in accordance with the recommended condition of consent, it is considered that the proposed activity would meet the policy objective of the NES.

### **7.3 PART 2 OF THE RMA**

It is considered that the proposed activity would avoid or mitigate any potential adverse effects on the environment while providing for sustainable management of resources and is therefore in keeping with the Purpose and Principles of the RMA.

### **7.4 DECISION ON RESOURCE CONSENT PURSUANT TO SECTION 104 OF THE RMA**

Consent is **granted** subject to the conditions outlined in *Appendix 1* of this decision report imposed pursuant to Section 108 of the RMA.

## **8.0 OTHER MATTERS**

### *Local Government Act 2002: Development Contributions*

This proposal is not considered a "Development" in terms of the Local Government Act 2002 as it will not generate a demand for network infrastructure and reserves and community facilities.

### *Administrative Matters*

The costs of processing the application are currently being assessed and you will be advised under separate cover whether further costs have been incurred.

The Council will contact you in due course to arrange the required monitoring. It is suggested that you contact the Council if you intend to delay implementation of this consent or if all conditions have been met.

This resource consent is not a consent to build under the Building Act 2004. A consent under this Act must be obtained before construction can begin.

This resource consent must be exercised within five years from the date of this decision subject to the provisions of Section 125 of the Resource Management Act 1991.



If you have any enquiries please contact Kate Wasley on phone (03) 441 0499 or email kate.wasley@qldc.govt.nz.

Report prepared by



Kate Wasley  
**PLANNER**

Decision made by



Quinn McIntyre  
**SENIOR PLANNER/TEAM LEADER**

- APPENDIX 1** - Consent Conditions
- APPENDIX 2** - Applicant's AEE
- APPENDIX 3** - Environmental Management Plan

## **APPENDIX 1 – CONSENT CONDITIONS**

### General Conditions

1. That the development must be undertaken/carried out in accordance with the plans by ICR Studio dated February 2015:
  - 'Locality Plan' sheet 0-02
  - 'Proposed Civil and Earthworks Plan' sheet 1-01
  - 'Set-Out and Site Grading' sheet 1-02
  - 'Proposed Surface Finish Plan' sheet 1-03
  - 'Proposed Drainage Plan' sheet 1-04
  - Forecourt Island Plans – Type 1 sheet 2-01
  - Forecourt Island Plans – Type 2 sheet 2-02
  - Forecourt Island Plans – Type 3 sheet 2-03
  - Dispenser Instruction Signage sheet 3-02

**stamped as approved on 14 April 2015**

and the application as submitted, with the exception of the amendments required by the following conditions of consent.

- 2a. This consent shall not be exercised and no work or activity associated with it may be commenced or continued until the following charges have been paid in full: all charges fixed in accordance with section 36(1) of the Resource Management Act 1991 and any finalised, additional charges under section 36(3) of the Act.
- 2b. The consent holder is liable for costs associated with the monitoring of this resource consent under Section 35 of the Resource Management Act 1991 and shall pay to Council an initial fee of \$240. This initial fee has been set under section 36(1) of the Act.

### Earthworks

3. All works shall be completed in general accordance with the latest version of the Z Energy Ltd document Environmental Management Plan for Site Works at Petroleum Handling Facilities (EMP).
4. All works associated with the removal of the fuel storage system must be undertaken in accordance with the current edition of *Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand*.
5. All engineering works shall be carried out in accordance with the Queenstown Lakes District Council's policies and standards, being New Zealand Standard 4404:2004 with the amendments to that standard adopted on 5 October 2005, except where specified otherwise.
6. At least 2 working days prior to commencing work on site the consent holder shall notify Council of:
  - a) The place where the removal will be done
  - b) The dates on which the removal will begin and end
  - c) The name of the facility at which it is intended that soil be taken away in the course of the activity be disposed of
  - d) Soil taken away must be disposed of at a facility authorised to receive such waste
7. The EMP shall be implemented to control and/or mitigate any dust, silt runoff and sedimentation that may occur, in accordance with NZS 4404:2004 and to minimise people's contact with the soil during the disturbance works – including the people undertaking the disturbance works and any people on neighbouring properties who might come into contact with contaminants moving off-site (for example, in dust or water).

These measures shall be implemented prior to the commencement of any earthworks on site and shall remain in place for the duration of the project, until all exposed areas of earth are permanently stabilised.

8. At least 2 working days prior to commencing excavations the consent holder shall provide to Council the name of a suitably qualified and/or experienced professional as defined in NZS 4404:2004 who is familiar with the EMP who shall supervise the excavation procedure and ensure compliance with the EMP. The suitably qualified and/or experienced person shall continually assess the condition of the excavation.
9. The removal of the fuel storage system shall be undertaken by an appropriately experienced contractor who will also be responsible for site management controls during the works to minimise any potential environmental impacts from the works.
10. The duration of the works must be no longer than 2 months.
11. The soil shall be reinstated to an erosion resistant state within one month of completing the works.
12. Should there be a structure in place designed to contain contaminants, then the integrity of the structure shall not be compromised.
13. The removal of the fuel storage system and associated soil benchmarking must be managed, monitored and reported on in accordance with the current edition of the *Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand*. The assessment report shall be provided to Council within 30 days of receipt of the final report from the consultant.

#### Stockpiles

14. Stockpiles shall be treated with a cover crop (e.g grass) within one month of completion of the stockpile.
15. Until such time as sufficient cover is achieved, in accordance with condition 14, appropriate erosion and sediment controls shall be installed to prevent erosion of the stockpile and errant sediment from entering overland flow paths.

#### Hours of Operation – Earthworks

16. Hours of operation for earthworks, shall be:
  - Monday to Sunday (inclusive): 7.00am to 6.00pm.
  - Sundays and Public Holidays: No Activity

In addition, no machinery shall start up or operate earlier than 7.00am. All activity on the site is to cease by 6.00pm.

#### Hazardous Substances

16. Any hazardous substance having eventuated from a spill or maintenance procedure shall be collected by maintenance contractors using sealed containers or specialised disposal trucks, and disposed of at an authorised facility.

**APPENDIX 2 - APPLICANT'S AEE**

SPECIALIST PLANNING & RESOURCE  
MANAGEMENT CONSULTANTS

**BURTON**

# Assessment of Environmental Effects

Wanaka Airport, Retanking Works,  
Wanaka Airport Lloyd Dunn  
Avenue, Luggate.

Prepared by: John McCall  
Burton Planning Consultants Limited  
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Takapuna  
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## Annexures

<b>Annexure 1</b>	Certificates of Title
<b>Annexure 2</b>	Plans
<b>Annexure 3</b>	Z Energy Environmental Management Plan for Site Works
<b>Annexure 4</b>	Hazardous Substances and New Organisms Code of Practice 2 Summary

## 1.0 INTRODUCTION

Z Energy Limited (*Z Energy*) proposes to carry out works at Wanaka Airport to better meet the fuel requirements of the airport. The airport is located opposite the Wanaka-Luggate Highway (State Highway 6) and Mount Barker Road intersection. This application relates to the proposed installation of a new underground petroleum storage system (*UPSS*) supplying a relocated Avgas and new Jet fuel storage facility and providing dispensing facilities for the Alpine Deer Group. All associated infrastructure including dispensers, stormwater systems (including API interceptor), light pole and signage as well as physical works (including earthworks and hardstand) are sought. The excavated earthworks from the new UPSS are to be stored on site.

Once the new refuelling facility is operational the existing 50,000 litre Avgas UPSS will be decommissioned and removed from the site (as the tank is at the end of its life). Overall the hazardous substance storage at the airport by Z Energy will double.

This application seeks all necessary resource consents from the Queenstown Lake District Council (QLDC) for the proposed works detailed in this application, including those required under the Resource Management (National Environment Standards for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (*NES*).

This Assessment of Environmental Effects (*AEE*) provides an assessment of the actual and/or potential effects on the environment of the proposal and includes an assessment of the relevant planning documents and the NES. This AEE accompanies, and forms part of, the resource consent application.

Wanaka Airport is owned by QLDC which controls the operation of the Aerodrome. Queenstown Airport Corporation Limited provides airport and property expertise to assist the QLDC with the management of the airport. These works are, however, being undertaken by Z Energy, not the requiring authority. We have been informed that the approval from QLDC as the Requiring Authority for the site will be sought upon our lodgement of this application. The written approval of Wanaka Aerodrome has been obtained.

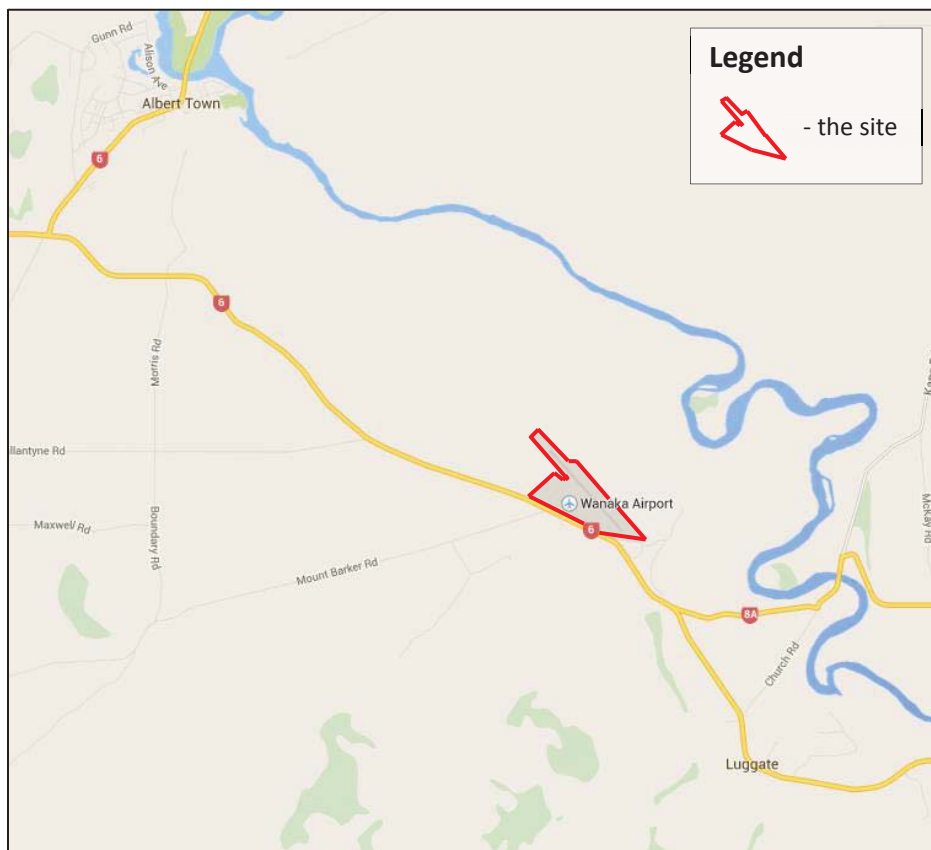


## 2.0 SITE DESCRIPTION

Wanaka Airport is located in Luggate, Otago. The site is described as Wanaka Airport, Lloyd Dunn Avenue and the main entrance is from State Highway 6 along Lloyd Dunn Avenue. The airport has an area of some 115 ha (more or less). The proposed works are to take place on the sites legally described as Lot 1 DP 341605, Lot 2 DP 368240, Lot 1 DP 18824 and Lot 2 DP 18824. Refer to **Annexure 1** for a copy of the Certificates of Title, and a complete list of the CT's. We note that there are a number of restrictions on the CT. These have not been obtained and reviewed at this time. To do so for the RMA process would take considerable time and expense and is unnecessary because any potential conflicts will be avoided through the commercial terms and agreement to lease that is to be agreed with Queenstown Airport Corporation Limited, on behalf of the QLDC as landowner.

The site's location is shown below in **Figure 1** and an aerial photograph addressing the site work locations are shown in **Figure 2**.

**Figure 1: Location Map**



*Source: Google Images (2014)*

Wanaka Airport is primarily used for sightseeing flights to Milford Sound and Mount Aspiring National Park as well as hosting the Warbirds over Wanaka air show. The airport also caters for flight school and training operations. The airfield has a sealed strip as well as a large grass area. The sealed strip is relatively narrow (30m). The surrounding paddocks are

used primarily for sheep grazing. There is a fence between these two areas to stop the sheep getting onto the seal.

**Figure 2: Aerial Photograph**



*Source: Webmaps – Queenstown Lakes District Council (2014)*

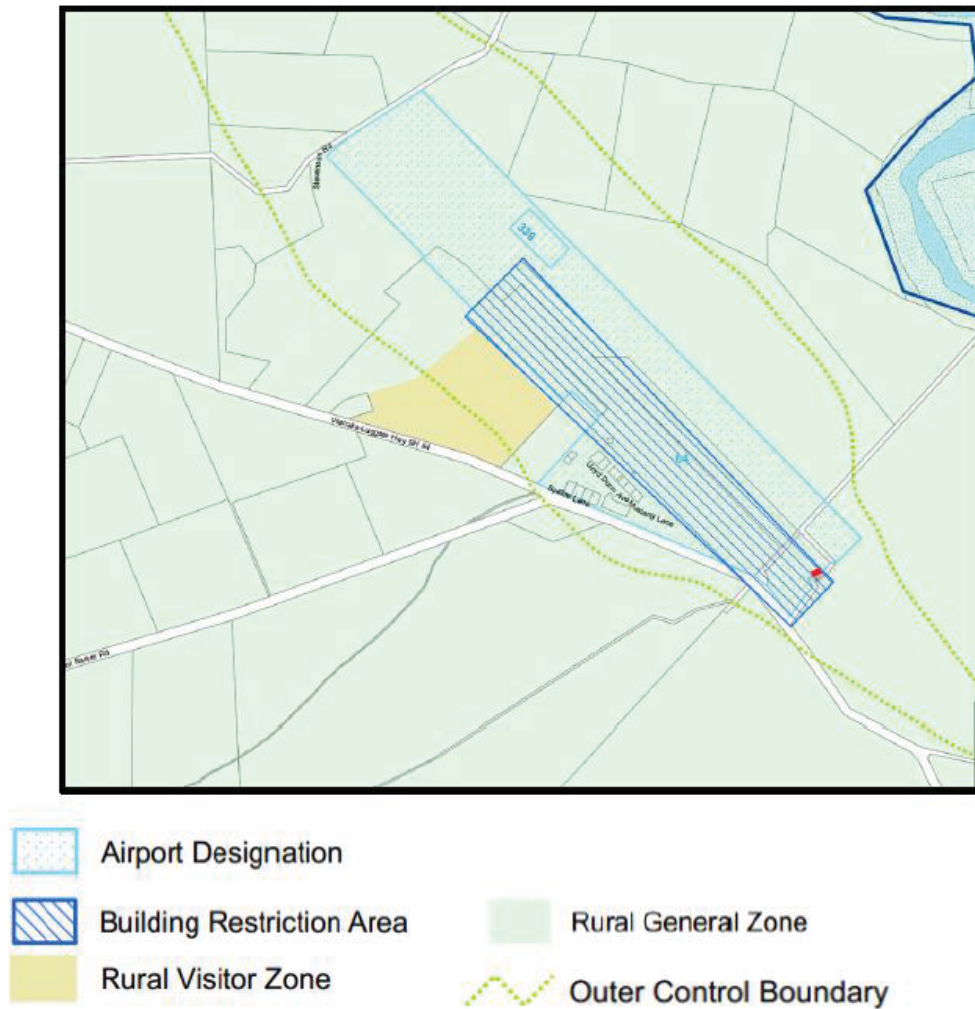
All structures are located on the southern portion of the site between State Highway 6 and the Runway. The proposed UPSS location (work site 1) will be between the hangars and the runway. This proposed location abuts the existing tarmac taxiway that connects the runway to the hangars (refer to **Annexure 2**). The earth excavated from this area will be stockpiled on the northern end of Lot 2 DP 368240 (work site 2). The Alpine Deer Group private dispenser will be installed adjacent to the Alpine Deer Group hanger (work site 3).

The existing Avgas tank pit (work site 4) is located between the Maintenance Hangar and the Alpine Deer Group Hanger (refer to **Annexure 2** for plans). Once the new UPSS works are completed, this UPPS will be removed and this site will no longer be a refuelling area for aircraft.

## 2.1 Zoning

The site is located in the 'Rural General' zone and lies within the 'Wanaka Airport Designation' and the 'Wanaka Airport Building Restriction' overlays. The area immediately surrounding the site is zoned 'Rural General' and 'Rural Visitor' as shown in **Figure 3** below:

**Figure 3: District Plan Zone Map**



Source: Queenstown Lakes District Council (2014)

## 3.0 THE PROPOSAL

### 3.1 Overview of the Proposed Works

In summary, Z Energy proposes the following works at the respective work sites:

- Site 1:**
- excavation works to establish a new UPSS
  - installation of two new 50kL tanks (1 x Avgas and 1 x Jet A1 fuel) and associated pipework underground
  - reinstatement of the new tank pit into the hardstand
  - excavation and installation of a new 3.5m API interceptor
  - sealing the area of works with hardstand
  - installing dispenser islands, sumps, soak hole, and vents
  - relocating existing batter north
- Site 2:**
- long-term stockpiling area for excavation material from Site 1 works
- Site 3:**
- trenching works across taxiway for a Jet A1 fuel line to link Site 3 to new UPSS
  - installation of new Jet A1 fuel dispenser (for private use by Alpine Deer Group)
- Site 4:**
- excavation and removal of the existing 50kL Avgas UPSS. This will occur approximately one month from when fuel is delivered to the new UPSS at Site 1. The tank pit will be backfilled using the material from the excavation works for the new tanks at Site 1 (if this is suitable to use).

Note that all earthworks are measured “in situ”.

Overall these works are expected to take some 8 weeks and the existing Avgas fuelling station will remain operational throughout the works, until the installation of the new fuelling facility is completed and the existing Avgas facility is decommissioned.

All works including the subsequent operation of the refuelling station, will be carried out in accordance with the Z Energy Environmental Management Plan for Site Works (EMP for Site Works)(refer to **Annexure 3**), Hazard Substances and New Organisms (*HSNO*) Act and accepted industry standards.

These works are discussed in more detail further below.

## 3.2 Site 1 – Location of Proposed Aviation Fuelling Facility

### 3.2.1 Earthworks

Earthworks are required for the installation of the new UPSS and API interceptor. Currently a 1.5m high batter borders the northern boundary of the existing asphalt apron servicing the runway. The proposed excavation will cut through and form a new batter of similar height further north (refer to **Annexure 2**). The area where the existing batter stands will be the site of the two underground tanks and the asphalt tanker path. Z Energy proposes, should no contamination be found, to stockpile the excess material excavated to be reused at a later date by Wanaka Airport (refer to **Annexure 2** for location of stockpiling – Site 2) – refer Section 3.3.1.

It is anticipated that the following excavation will be required over a 2596m<sup>2</sup> area:

<b>Pit:</b>	675m <sup>3</sup>
<b>Bulk earthworks (batter, API etc.)</b>	2375m <sup>3</sup>
<b>Trenching</b>	170m <sup>3</sup>
<b>Contingency:<sup>1</sup></b>	150m <sup>3</sup>
Total earthworks = <b>3370m<sup>3</sup></b>	

The tank installation works will be completed in accordance with the EMP for Site Works, which forms part of the application and which is attached as **Annexure 3**. The EMP for Site Works details with the environmental management measures which are to be implemented during the site works.

### 3.2.2 Fuel Dispenser

The proposed UPSS supplies fuel to three different dispensers. Site 1 will contain two of these dispensers (1 x Avgas and 1 x Jet A1 fuel). The individual Avgas and Jet A1 dispensers will be located on their respective refuelling slabs (refer to **Annexure 2** for locations of Avgas and Jet A1 refuelling slabs). The third dispenser island is located at Site 3 (refer to section 3.4.2 below).

To reduce the likelihood of a spill, the dispensers at Site 1 will be installed on raised islands (0.15m high). These islands comprise a hose reel, dispenser, outdoor payment terminal, a light pole and signage contained within an area of 1m x 6m. Bollards will be installed at each corner of the island to reduce damage to equipment from vehicle or aircraft impact. The emergency shut off valves for both dispenses will be located on the spill kit island (described in section 3.2.3 below).

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<sup>1</sup> Should unexpected contamination be encountered that is appropriate to remove as part of the tank pit excavation – refer to Section 3.5 of this assessment for more detail.

### 3.2.3 Spill Kit Island

A 0.15m high island will be located at Site 1 between the Avgas and Jet A1 refuelling slabs (on the periphery of the hardstand). Similar to the fuel dispenser islands, this island will assume 1m x 6m with bollards installed at each corner of the island to prevent collision damage from vehicles or aircrafts. This island comprises one emergency shutdown button that will close down the site, a QA box and a hazardous spill kit.

### 3.2.4 Signage

Signage associated with each dispenser will be located adjacent to the outdoor payment terminals on both of the pump islands (refer to **Annexure 2**). The signage comprises one 'Z Aviation' sign (approximately 1.5m x 1.1m) standing some 2m high. This sign illustrates warnings, emergency contact information and instructions for refuelling an aircraft. The signs are designed in accordance with *Hazardous Substance and New Organisms Code of Practice 2 – signage for premises storing hazardous substances and dangerous goods* (refer to **Annexure 4** for summary of code).

### 3.2.5 Light Pole

One light pole will be installed on each of the dispenser islands at Site 1. The poles will form the support beams for mounting the outdoor payment systems at each island. As Wanaka Airport is operational 24/7, the light pole will aid navigation of vehicles and aircraft as well as operators of the dispenser in low light conditions.

## 3.3 Site 2 – Location for Placement of Relocated Material

### 3.3.1 Stockpiling of Excavated Material

It is expected that the soil resulting from the excavation of the proposed tank pit and the excavation of the existing batter will not be contaminated. If this is the case, Z Energy proposes to stockpile this excavated material to be reused at a later date by Wanaka Airport (refer to **Annexure 2** for location of stockpiling – Site 2). The total expected volume of material to be relocated from Site 1 and stockpiled on Site 2 is some 3050m<sup>3</sup>.

Similar to the contaminated material procedures, if stockpiling is to occur Z Energy will proceed in accordance to the site management procedures outlined in the EMP for Site Works (refer to **Annexure 3**), and aspects of the Contaminated Site Guidelines Module 7 – Site Management, Ministry for the Environment, August 1999 as follows:

- Hay bales or similar form of silt containment will be placed around the stockpiled soil, until suitable dust and erosion prevention measures are established.
- All stockpiles will be kept tidy, less than 4m in height, with a stable slope. A suitable dust / erosion prevention methodology will be applied. This may include grassing or cover, but the method chosen will depend upon the time frame within which the stockpile is to be used by the airport.

### 3.4 Site 3 – Location of Proposed Alpine Deer Group Aviation Fuelling Site

#### 3.4.1 Earthworks

A Jet A1 fuel dispenser is proposed adjacent to the Alpine Deer Group hangar for its exclusive use (refer to **Annexure 2**). The dispenser will be connected via a fuel line to the proposed UPSS at Site 1. Trenching is required to safely install the fuel line and 32mm ATG conduits (power cable) underneath the existing taxiway and airport grounds.

It is anticipated that the following excavation will be required over a 200m length:

<b>Trenching</b>	70m <sup>3</sup>
------------------	------------------

Trenching will be restricted to 50m length segments in order to reduce soil exposure and disruption to airport operations. The trenching works are expected to take three days or so, though each 50m length will be backfilled before the next section is done.

#### 3.4.2 Fuel Dispenser

The proposed Jet A1 fuel dispenser at Site 3 is for the private use of the Alpine Deer Group. The dispenser will be located adjacent to the Alpine Deer Group hangar on Lot 1 DP 341605. There will be no fuel tanker dropping compartment at this location because this is a dispenser only and will draw upon the fuel located and stored at Site 1. However a fire extinguisher and an emergency shutdown push button (that will stop the dispenser) are located adjacent to the dispenser as a precautionary measure. A standard Z Aviation dispenser instruction sign will also be located on the island.

Similar to Site 1, the dispenser island will be installed on the existing raised island (0.15m high) to reduce the likelihood of a spill. The dispenser island comprises a hose reel, dispenser, outdoor payment terminal and signage contained within an area of 1m x 6m. Bollards will be installed at each corner of the island to reduce damage to the island and equipment from vehicle or aircraft impact.

### 3.4.3 Signage

Refer to section 3.2.4 for details on signage.

## 3.5 Site 4 – Location of Existing Aviation Fuelling Facility

### 3.5.1 Environmental Testing

Z Energy will commission specialists to undertake environmental benchmarking of the excavation of the tank pit and provide guidance to Z Energy on the extent of required excavation. In this respect, following excavation, the natural soils will be visually assessed and field screening of soil samples will be undertaken as standard industry practice. Once this has been completed, it will be possible to determine and characterise the nature and extent of any contamination within the tank pit (if present). The results of this testing will be made available to the Council as required by the NES.

### 3.5.2 Earthworks

Earthworks are also required for the excavation and backfilling of the existing Avgas UPSS. This will be carried out approximately one month from when fuel is delivered to the new tanks. The pit is generally level and the proposed finished levels will be similar to the existing pit. It is anticipated that the following earthworks will be required:

<b>Backfilling:</b>	115.2m <sup>3</sup>
<b>Contingency:</b>	150m <sup>3</sup>

Total earthworks = **265.2m<sup>3</sup>**

Note that backfilling material will be sourced from the excess excavation material from the new tanks / batter (should no contamination be found).

### 3.5.3 Removal and Decommissioning of Existing UPSS

The removal of the existing 50kL Avgas UPSS will only commence after the proposed fuelling facility is operational (approximately one month after fuel is delivered to the new tanks).

The Avgas tank removal process will proceed as follows:

- Excavation and removal of bedding material associated with the existing UPSS
- Benchmarking of the excavations by collection of soil samples for analysis
- Any hydrocarbon impacted soils from the tank pit for disposal off site at an authorised facility, in accordance with MfE Guidelines for Assessing and Managing



Petroleum Hydrocarbon Contaminated Sites in NZ (revised 2011) (*The Contaminated Sites Guideline*).

- Reinstatement of the site surface to an erosion proof state (as required) and to a level consistent with the surrounding site (hardstand).
- Preparation of a UPSS Decommissioning Report in accordance with the contaminated Land Management Guideline No 1 – Reporting on Contaminated sites in NZ (MfE 2011). A copy of this report will be provided to the Council once complete, in accordance with the requirements of the NES.

#### 3.5.4 Contaminated Material

All contaminated material will be removed, handled, transported and disposed of as follows:

- Should contaminated soil be encountered it will be loaded directly from the tank pits onto the trucks for removal and disposal at a facility certified to take waste of that nature.
- Where the material cannot be loaded directly onto a truck it will be stockpiled in accordance with the site management procedures outlined in the EMP for Site Works (refer to **Annexure 3**), and consistent with the Contaminated Site Guidelines Module 7 – Site Management, Ministry for the Environment, August 1999, as summarised as follows:
  - If temporary stockpiling of soil from the tank pits is required, the soil will be stored on concrete hard standing or polythene sheets to minimise potential leaching of any contaminants to underlying soils.
  - All stockpiles (if required) will be kept tidy, less than 4m in height, with a stable slope. Stockpiles will be covered with polythene sheets, or similar, during rain events or windy conditions to prevent stormwater discharge or wind-blowing dust generation.
  - In most cases, stockpiled soil will be carted off the site on the same day of the day following the excavation.
  - Where necessary (e.g. for long-term stockpiles) hay bales or similar form of silt containment will be placed around the stockpiled soil and stormwater drains/grates top help prevent surface run-off.

- The stockpile area will be fenced to prevent public or unauthorised access.
  - It is not expected that any stockpiled material will be odorous, however if it is then it will be covered with an impermeable material or other form of odour suppression (e.g. application of odour suppressant compounds) to limit the potential release of odours.
- 
- The entire area of the earthworks will be cordoned off to prevent access to the work area by the general public and excavation is carried out by a mechanical digger (not hand held machinery).
  - Imported fill will be temporarily stockpiled in a designated, clean area on site. All imported fill is required to be free of contaminants. The same precautions described above to avoid dust/siltation/odour etc. will be adopted for clean fill material stockpiled on the site.
  - All trucks carrying excavated material off-site will be securely covered and will proceed directly to the land fill.
  - Human health and safety will be addressed through compliance with the Health and Safety Act, which protects the safety of individual workers, and through adherence to a generic maintenance/excavation worker plan for areas with potential hydrocarbon contamination, as well as other standard Z Energy procedures.
  - All old associated pipework will be removed from the site and deposited off at an approved facility.

## 4.0 ASSESSMENT OF RELEVANT PROVISIONS

### 4.1 Operative Queenstown Lakes District Plan

The site is located in the 'Rural General' zone and is within the 'Wanaka Airport Designation' and 'Wanaka Airport Building Restriction' overlays in the operative Queenstown Lakes District Plan (*the District Plan*). The area immediately surrounding the site is zoned 'Rural General' and 'Rural Visitor'. Note that the plans indicate that only the stockpiling and excavation works for the new tank pit will take place within the 'Wanaka Airport Designation' (refer to **Annexure 2**).

Where the works are in accordance with a designation and the Requiring Authority has financial responsibility for the works, the ordinary District Plan rules do not apply to a designated site, but rather the works must be in accordance with the designation and may need to be authorised by an outline plan of works. However, in this case the works are to be undertaken by Z Energy and not the Requiring Authority, therefore the works cannot be completed in accordance with the designation and compliance with the District Plan rules for the underlying **General Rural Zone** is required.

We note that works undertaken on a designated site by any party other than the Requiring Authority must not prevent or hinder the use of the land for the designated purpose. The Wanaka Aerodrome has reviewed the proposed works and expressed no concerns of disruption to the use of the land for airport purposes. Its written approval has been obtained. As the QLDC is the Requiring Authority, its approval is being sought concurrent to the lodgement of this application.

### 4.2 Consents required by the District Plan

An assessment of all relevant provisions of the operative District Plan is provided below.

#### 5.3.3.3v Discretionary Activities / Airport:

*Airports other than the use of land and water for:*

- (a) emergency landings, rescues and fire fighting;*
- (b) activities ancillary to farming activities.*

The definition of an airport is as follows:

*Means any defined area of land or water intended or designed to be AERODROME used whether wholly or partly for the landing, departure, movement or servicing of aircraft.*

The activity falls to be considered under the activity of the servicing of aircraft, and therefore falls within the definition of airport. **Discretionary activity consent is required.**

## Queenstown Lake District Plan 2011 – Rural General Zone (section 5)

Rule	Standard	Complies?
<p><b>5.3.3.3(xi)</b> <i>Discretionary Activities</i></p>	<p>Any activity which is not listed as non-complying or prohibited and which complies with the zone standards but not the site standards is a restricted discretionary activity, with the exercise of the Council’s discretion being confined to the matter(s) specified in the standard(s) not being complied with.</p> <p>Notes: Buildings are discretionary as long as the zone standards will be met (and they have been evaluated under the assessment criteria in rule 5.4 – a requirement which is ultra vires as it requires a discretionary judgement to determine activity status).</p> <p>Structures erected within 10m of a road boundary and meeting certain specifications also require restricted discretionary activity consent.</p>	<p><b>Restricted Discretionary</b> <i>The zone standards will be met. Restricted discretionary consent is required specifically in respect of any site standards which will not be met (which will include earthworks – see below).</i></p> <p>Notes: <i>The definition of building in this District Plan has the same meaning as in the Building Act 1991. The Building Act 1991 specifically states that buildings do not include containers as defined in section 2 of the Dangerous Goods Act 1974. Section 2 of the Dangerous Goods Act 1974 defines container as follows: “Container” means any barrel, case, cylinder, drum, tank, tin, or other receptacle; and includes every package in or by which goods may be cased, covered, enclosed, contained, or packed. Accordingly, the tank is not a building for the purposes of the District Plan.</i></p> <p><i>Furthermore, the District Plan states ‘buildings’ does not include structures less than 5m<sup>2</sup> in area and in addition less than 2m in height above ground level. Therefore the dispensers, although classified as ‘structures’ do not fall under the ‘building’ definition thus discretionary activity is not sought.</i></p> <p><i>No structure will be within 10m of the road boundary.</i></p>
<b>Site Standards</b>		
<p><b>5.3.5.1(viii.1)</b> <i>Earthworks</i></p>	<p>a) Earthworks shall not exceed a maximum area of bare soil exposed of 2500m<sup>2</sup> per site, within any one consecutive 12 month period.</p> <p>b) Earthworks shall not exceed a maximum volume of moved earth greater than 1000m<sup>3</sup> per site, within any one consecutive 12 month period.</p> <p>c) Where any earthworks are</p>	<p><b>Restricted Discretionary</b> <i>The works are not known to be in proximity to a waterbody. The volume of moved earth exceeds 1000m<sup>3</sup> and 2500m<sup>2</sup> per site in one consecutive 12 month period. Note that the volume of earth moved includes excavation and fill for both the removal and the installation of the tanks.</i></p>

## Queenstown Lake District Plan 2011 – Rural General Zone (section 5)

Rule	Standard	Complies?
	<p>undertaken within 7m of a water body the total volume shall not exceed 20m<sup>3</sup> (except for earthworks undertaken within a road designation for the purpose of establishing, upgrading and/or maintaining a State Highway Network).</p>	<p><i>The Airport has confirmed that the last earthworks on site were the excavation of the light aircraft taxi way last March.</i></p>
<p><b>5.3.5.1 (viii.2)</b> <i>Height of cut and fill and slope</i></p>	<p>a) No road, track or access way shall (other than the Arrow Irrigation Scheme and flood protection works) have an upslope cut or batter greater than 1 metre in height, measured vertically</p> <p>b) All cuts and barriers shall be laid back such that their angle from the horizontal is no more than 65 degrees unless previously determined.</p> <p>c) The maximum height of any fill shall not exceed 2 metres</p>	<p><b>Restricted Discretionary</b> <i>The cuts required for the tank pit will not meet (b). The filling of the existing tank pit will not meet (c) as the maximum height is measured from the bottom of the pit.</i></p>
<p><b>5.3.5.1(viii.3)</b> <i>Environmental Protection Measures</i></p>	<p>a) Any person carrying out earthworks shall:</p> <p>i) Implement erosion and sediment control measures to avoid soil erosion or any sediment entering any water body. Refer to the Queenstown Lakes District earthworks guideline to assist in the achievement of this standard.</p> <p>ii) Ensure that any material associated with the earthworks activity is not positioned on a site within 7m of a water body or where it may dam or divert or contaminate water.</p> <p>b) Where vegetation clearance associated with earthworks results in areas of exposed soil, these areas shall be re-vegetated within 12 months of the completion of the operations</p> <p>c) Cut or fill shall not expose the groundwater aquifer (water bearing gravels) causing ponding or causing artificial drainage of the aquifer</p>	<p><b>Compliance achieved</b> <i>It is understood that the groundwater level is well below ground level (approximately 60m).</i></p>

## Queenstown Lake District Plan 2011 – Rural General Zone (section 5)

Rule	Standard	Complies?
5.3.5.1(x) <i>Indigenous Vegetation</i>	No clearance of indigenous vegetation except for...	<b>Compliance achieved</b> <i>It is understood that no indigenous vegetation on the site to be cleared.</i>
<b>Zone Standards</b>		
5.3.5.2(v) <i>Noise</i>	<p>a) Sound from non-residential activities measured in accordance with NZS 6801:2008 and assessed in accordance with NZS 6802:2008 shall not exceed the following noise limits at any point within the notional boundary of any residential unit, other than residential units on the same site as the activity:</p> <p>i) Daytime (0800 to 2000 hrs) 50dB LAeq (15 min)</p> <p>ii) Night-time (2000 to 0800 hrs) 40dB LAeq(15 min)</p> <p>iii) Night-time (2000 to 0800 hrs) 70dB LAFmax</p> <p>b) Sound from residential activities which is received in another zone shall comply with the noise limits in (a) shall not apply to construction sound which shall be assessed in accordance and comply with NZS 6803:1999</p>	<b>Compliance anticipated</b> <i>The nearest residential dwelling is some distance away.</i>

## Queenstown Lake District Plan 2011 - Hazardous Substances (section 16)

Rule	Standard	Complies?
16.2.2.2 Discretionary Activities	The storage of hazardous substances identified in Schedule 1 (including Class 3 hazardous substances) in Quantities exceeding the threshold in Column A but not exceeding the threshold in Column B (where specified) for the General Rural Zone.	<b>Discretionary Activity Consent required.</b> <i>There is no limit in Column B, but the threshold in Column A is exceeded.</i> Note that for a short period of time, the storage of hazardous substances will be 150,000 litres, although this will only be temporary (while both the new and existing facilities are operating).

## Queenstown Lake District Plan 2011 - Hazardous Substances (section 16)

Rule	Standard	Complies?
16.2.4.1 (i) <i>Site Standards</i>	All areas or parts of sites where solid and/or liquid hazardous substances (including waste) are stored, loaded or unloaded shall be safely contained.	<b>Compliance anticipated</b> <i>Tanks are double skinned and meet all HSNO containment requirements.</i>
16.2.4.1 (ii) <i>Site Standards</i>	To achieve (i) [above], the following specifications are required:  (a) The volume of any containment system shall be 100% of the maximum volume of the hazardous substance to be stored, loaded or unloaded when the site is roofed;  (b) The containment system shall be designed in such a way as to ensure containment of any hazardous substance that spills due to the collapse of any container (e.g. tank), and the containment from the direct leakage from any container.  (c) The containment system shall be sealed with impervious materials that are resistant to breakdown from the particular hazardous substances, which they are designed to contain;  (d) The containment system and its sealment shall be maintained as and when necessary.	

## Queenstown Lake District Plan 2011 - Signage (section 18)

Rule	Standard	Complies?
18.2.5(i) Exemptions <i>Sign Exemptions</i>	The following signs shall be exempt from the above standards:  (i) Signs required by Acts of Parliament. All signs required to be displayed by any legislation and displayed in accordance with the provisions of that legislation.  (ii) Real Estate Signs  (iii) Electioneering Signs	<b>Compliance Anticipated</b> <i>All three 'Z Aviation' signs on site are required by law pursuant to the Hazardous Substances and New Organisms Code Of Practice 2 – regulatory requirements relating to signage (which are summarised in Annexure 4 for your convenience)</i>

#### 4.3 National Environmental Standard: Assessing and Managing Contaminants in Soil to Protect Human Health

The NES came into force on 1<sup>st</sup> January 2012 and deals with territorial authority functions under Section 31 of the Resource Management Act 1991 (*the Act*). This NES applies to a “piece of land” that is described by one of the following:

- *An activity or industry described in the HAIL is being undertaken on it;*
- *An activity or industry described in the HAIL has been undertaken on it;*
- *It is more likely than not that an activity or industry described in the HAIL is being or has been undertaken on it.*

Airports are listed on the HAIL list; therefore the area of the site occupied by the airport is a HAIL activity.

##### **Removal of Fuel Storage**

Clause 8(1) of the NES makes a provision for the removal and replacement of a fuel storage system as a permitted activity. The permitted activity standards set out in Clause 8(1)(e) provides for 30m<sup>3</sup> of soil disturbance/removal per tank. In respect to the proposal for the removal and replacement of the existing Avgas UPSS, the NES provides a permitted allowance of only 30m<sup>3</sup>. The hardstand and bedding material that is required to be removed from the existing tank pit is not classified as “soil” under the NES. Although the proposal would meet the permitted activity criteria for Clause 8(1) of the NES, contingency is sought for 120m<sup>3</sup> of soil removal in the event contaminated soil is found during the tank removal process. While this is not expected, if a limited extent of contaminated material is discovered as part of the retanking works it is pragmatic to remove it as part of the retanking works. Therefore the proposal does not meet the criteria for a permitted activity status. Nor can the proposal meet the controlled or restricted discretionary activity standards set out in Clause 9 and 10 respectively, as a detailed site investigation report has not been produced. As such, the proposed UPSS removal is a **discretionary activity** under Clause 11 of the NES.

We note the proposed works in this application involve the replacement of the existing 50,000 litre Avgas tank. However, because the new replacement tank is to be installed in a new tank pit it cannot be assessed under Clause 8(1) of the NES as the tank is considered to be new for the purpose of the NES.



## ***Disturbance of Soil***

Clause 8(3) of the NES provides for the disturbance of soil on a piece of land as a permitted activity subject to compliance with a number of specific criteria, including that the volume of soil disturbance does not exceed  $25\text{m}^3$  per  $500\text{m}^2$ , that  $5\text{m}^3$  per  $500\text{m}^2$  can be removed from the site and that the duration of works does not exceed two months.

The NES applies to any “piece of land”. Piece of land is defined in the NES as including *an activity or industry described in the HAIL is being undertaken on it*. The HAIL list includes (as F1) airports including fuel storage, workshops, washdown areas, or fire practice areas (our emphasis). As such, the HAIL activity is the airport and the piece of land is that land which accommodates the airport. At Wanaka Airport, the total area of the piece of land (as defined by the NES) is therefore some 115 ha.

Regulation (8)(3)(c) permits disturbing the soil of the piece of land. It refers to the “*volume of the disturbance of the soil of the piece of land must be no more than  $25\text{m}^3$  per  $500\text{m}^2$ ” (my emphasis, and note that the regulation is based on the area of the piece of land NOT the area affected by the activity). Accordingly the permitted volume of soil disturbance would be approximately  $57,500\text{m}^3$  and  $19,665\text{m}^3$  can be removed from the site as a permitted activity.*

There have been no earthworks activities in the past 12 months. The earthworks associated with the proposed works will fit within these limits. It is proposed to stockpile the majority of clean soil for future use, but some soil may need to be removed from the site. Compliance with Clause 8(3)(c) can be achieved. As such, the propose site works must be considered as a **permitted activity** under the NES.

In terms of permitted activity compliance the following is relevant:

Disturbing the soil of the piece of land is a permitted activity while the following requirements are met:

(a) controls to minimise the exposure of humans to mobilised contaminants must—

- (i) be in place when the activity begins:
- (ii) be effective while the activity is done:
- (iii) be effective until the soil is reinstated to an erosion-resistant state:

*These will be in place. Clearly compliance cannot be demonstrated prior to the activity being undertaken because effectiveness during the activity is only able to be measured during the works, however the management of dust and sediment throughout the works will ensure that this requirement is met (eg: refer Section 5.3 of the AEE).*

(b) the soil must be reinstated to an erosion-resistant state within 1 month after the serving of the purpose for which the activity was done:

*This will be met as indicated in the AEE in terms of management of stockpiles and reinstatement of other land in either grass or hardstand.*

(c) the volume of the disturbance of the soil of the piece of land must be no more than 25 m<sup>3</sup> per 500 m<sup>2</sup>:

(d) soil must not be taken away in the course of the activity, except that,—

- (i) for the purpose of laboratory analysis, any amount of soil may be taken away as samples:
- (ii) for all other purposes combined, a maximum of 5 m<sup>3</sup> per 500 m<sup>2</sup> of soil may be taken away per year:

*Refer discussion above. This will be met.*

(e) soil taken away in the course of the activity must be disposed of at a facility authorised to receive soil of that kind:

*If soil disposal is required then this will be met.*

(f) the duration of the activity must be no longer than 2 months:

*This will be met. Refer earlier confirmation that the activity will take some 8 weeks.*

(g) the integrity of a structure designed to contain contaminated soil or other contaminated materials must not be compromised.

*The integrity of the new UPPS will be ensured through compliance with HSNO.*

#### 4.4 Status of the Application

All required resource consents are sought. At this stage, these are expected to include the following:

- **Discretionary Activity** pursuant to rule 5.3.3.3v Discretionary Activities / Airport.
- **Restricted Discretionary** pursuant to rule 5.3.3.4.vi – the activity does not comply with more than one of the site standards, including:
  - Rule 5.3.5.1.viii.1 – the earthworks exceed the 1000m<sup>3</sup> threshold
  - Rule 5.3.5.1.viii.2 – cuts required for the tank pit will not meet (b) or (c)
- **Discretionary Activity** pursuant to rule 16.2.2.2 - the proposed increase in the storage of hazardous substances will exceed the permitted activity thresholds. For a short period of time, the storage of hazardous substances will be 150,000 litres, although this will only be temporary (while both the new and existing facilities are operating). Once the existing facility is removed, 100,000 litres of hazardous substances will be stored at the facility.
- **Discretionary Activity** pursuant to Clause 11 of the NES for soil disturbances associated with the tank replacement works on the site.

## 5.0 ASSESSMENT OF ENVIRONMENTAL EFFECTS

The following section of the report assess the actual or potential effects on the environment arising from the proposed works, taking into account the relevant objectives, policies and assessment criteria of the operative District Plan and the purposes and principles of the Resource Management Act 1991. Accordingly, Section 5 should be read in conjunction with Section 4 and Section 6 of this assessment. The following assessment is intended to complement, rather than repeat, the assessments in the other Sections.

### 5.1 The Existing Environment

The consent authority must disregard the effects of the existing lawfully established environment. This includes use of the site as an airport and an aircraft refuelling facility (noting the existing Avgas tank to be removed from site).

The suitability of the site for an airport has been previously established through the underlying resource consents and designations relating to the activity. The use has not been discontinued and the integrity of the site as an airport will not be affected by the proposed retanking works. Therefore the use of the airfield as an aircraft refuelling facility should be discounted (i.e. storing up to 50,000 litres of hazardous substances on site).

Furthermore, the reforming of a batter for the installation of a new UPSS will proceed in a way in which the size, location and visual impact remains more or less consistent with the existing environment (existing batter). An increased curvature and relocation some 25m north are the only notable difference between the existing and proposed batter. Both batters will remain behind the airfield buildings - out of site from the public view. The proposed batter, similar to the existing batter, hugs the boundary of the hardstand shielding the runway from activities occurring on the tarmac. Therefore the reforming of a batter for the installation of a new UPSS should be discounted.

### 5.2 The Permitted Baseline

The Council may disregard an effect if the District Plan permits an activity with that effect. As the airport is a HAIL site, when assessing earthworks with regard to soil disturbance, the NES has precedence over the District Plan. The disturbance of soil provisions under Clause 8(3) of the NES requires controls to minimise the exposure of humans to mobilised contaminants. These controls are to be in place when the activity begins and will be effective until the activity is done and the soil is reinstated to an erosion-resistant state. These controls will be in accordance with Z's EMP for Site Works (refer to **Annexure 3**). This forms part of the permitted baseline, and the associated effects of such earthworks should

be disregarded. These include construction effects (e.g. heavy traffic movement) and potential nuisance effects (e.g. dust, noise and vibrations).

### 5.3 Temporary Effects

The period over which the construction works are undertaken is relatively brief and any resultant short-term effects on any other party will be less than minor.

Sedimentation or contaminants are not allowed to enter any stormwater drains, channels or soakage systems, or flow on to the road. Any stockpiling on the site will be controlled in accordance with the EMP of Site Works (refer to **Annexure 3** and Section 3.3 of this report).

All demolition materials (the old Avgas tank pipes, pumps and concrete slab) will be removed from the site and appropriately disposed of.

The area of works will be restricted access only i.e. no members of the public or aerodrome will have access to the work area, open excavation will be minimised to the extent practicable, and impacted material will be removed from the site as soon as possible.

The EMP for Site Works (refer to **Annexure 3**) describes the site management regime that will be adopted to mitigate and address potential nuisance effects, including in respect of noise and dust for aerodrome activities.

The remedial excavations will be planned in a manner that reduces exposure of soils to atmosphere to the extent practicable and promotes prompt removal of impacted soil from the site. Any temporary stockpiles will be covered while on site as per procedures outlined in the EMP for Site Works (refer to **Annexure 3** and section 3.3 of this report) and excavations will be undertaken during favourable weather conditions, in particular wind direction e.g. blowing away from the runway, or suitable management techniques adopted to ensure the potential adverse effects that can be generated by weather conditions are appropriately managed.

Maintenance and excavation workers and/or contractors performing the remedial works are at risk of direct contact with hydrocarbon impacted soils on the site. Z Energy has in place procedures and systems to make maintenance and excavation workers/consultants aware of potential hazards or risks relating to the exposure to petroleum hydrocarbons during site disturbance activities. The contractors working at the site during the remedial works will be required to work under the Z Energy Permit to Work system which addresses potential risks associated with the residual hydrocarbon and how to mitigate these risks. Additionally, a generic maintenance/excavation worker plan for area with potentially hydrocarbon contamination is attached to the back of the EMP for Site Works (refer to **Annexure 3**). Hydrocarbon vapours emitted from potentially impacted soils have the potential to cause nausea and dizziness to works on-site or nuisance to airfield works if present in high

concentrations. The excavation will be open to atmosphere, and the risk of vapour build up in such atmospheres is considered limited.

Human health and safety will also be addressed through compliance with the Health and Safety Act, which protects the safety of individual workers. Z's contractors have a history and expertise in dealing with potentially hydrocarbon impacted soils, and carrying out works such as those proposed. Those contractors adopt a strict regime for working with potentially hydrocarbon impacted soils, meeting the Oil Companies requirements, the Health and Safety Act and adopting appropriate person protective equipment (PPE) and methodologies when carrying out the works. As required by Health and Safety legislation, a comprehensive Health and Safety Plan is developed prior to commencement of works and all contractors review this prior to starting at the site. Each operator at the site must be inducted in terms of Health and Safety requirements (including hazards) at the site, and each person is then required to confirm (by signature) that they have understood these requirements.

The proposed trenching works across the taxiway will be carried out ensuring the least disturbance as possible to the aerodrome operations. To achieve this, the proposed trenching works will be completed within three days or so. The trenching will be in 50m segments to ensure aircraft can still navigate the taxiway safely. The 50m segments will be backfilled and resealed before the next one is trenched. The airport manager has advised Z Energy that the use of the grass area adjoining the southern boundary of the taxiway is more than suitable for aircraft to use as a temporary taxiway (should the trenching works at any time prevent that aircraft from using the entire length of the taxiway).

Z Energy has discussed the temporary effects of the proposal with the airport manager and written approval for Wanaka Aerodrome has been obtained.

#### **5.4 Potential Contamination**

It is not expected that any contamination will be encountered for the existing tank. Z Energy will commission specialists to undertake environmental benchmarking of the existing tank pit at the time of the excavation and removal of the tank. In this respect, the natural soils will be visually assessed and field screening of soil samples will be undertaken as standard industry practice. The results will be noted in a tank pull report and supplied to the QLDC in accordance with the NES.

Stockpiling of excavated material is proposed should there be no contaminants present. If the excavated material is found to be contaminated, the material will be removed from the site and disposed of at an approved landfill/waste disposal facility (refer to section 3.5.4).

## 5.5 Earthworks

As identified above (section 5.2), the effects of the soil disturbance associated with the new UPSS should be discounted due to the permitted baseline created by the NES. Clause 8(3) of the NES provides for the disturbance of soil on a piece of land as a permitted activity subject to compliance with a number of specific criteria, including that the volume of soil disturbance does not exceed 25m<sup>3</sup> per 500m<sup>2</sup>, that 5m<sup>3</sup> per 500m<sup>2</sup> can be removed from the site and that the duration of works does not exceed two months. Even with the contingency included, the earthworks associated with the proposed works have a total volume of soil disturbance well below the permitted threshold. Section 104(2) of the Act states that a Council may disregard an adverse effect of an activity on the environment if a National Environmental Standard or the District Plan permits an activity with that effect. Accordingly, it is appropriate to discount the effects of the earthworks associated with the tank installation activities.

The tank pits will be battered for excavation, and therefore the associated excavations will be stable and safe.

In any case, the proposed tank removal and installation of a new UPSS will be designed to the high standard adopted by the New Zealand Oil Industry at services stations, truck stops and airports throughout New Zealand. Such a standard represents best practice that is unlikely to result in adverse environmental effects. Measures are to be undertaken in order to ensure that any potential additional adverse effects on human health associated with the activity and relating to the potential for and to be contaminated by virtue of historical land uses are appropriately mitigated. On balance, risk is appropriately managed in accordance with accepted industry standards and the potential adverse effects of the activity will be less than minor.

## 5.6 Stockpiling

Stockpiling will only proceed on Site 2 if the excavated material is not contaminated. Given the location of the excavated material it is highly unlikely that contamination will be found. Stockpiling will be in accordance with the specific criteria noted in section 3.3 of this assessment. The stockpiles will be located some 1km away from any aerodrome activities and the stockpiles will be partially hidden behind the existing vegetation. Dust generation and/or erosion potential will be mitigated, potentially through the use of grassing or sheet covering (depending on how long the stockpile will be stored for). The visual impacts of the stockpiling are considered less than minor as the site is far from public view or human activity.

## 5.7 Hazardous Substances – Storage of Petroleum Products

### Compliance with HSNO

The new UPSS (including all necessary work) have been designed and will be installed and operated within established legislative requirements and non-regulatory codes and guidelines, including the Hazardous Substances and New Organisms (HSNO) Act 1996 and associated Regulations.

### Compliance with Codes of Practice and Standards

It is widely accepted that potential adverse environmental effects and risks to the natural and physical environment or to public health and safety presented by facilities such as those proposed is minimised to an acceptable level by the current practices of the Oil industry including meeting all licensing requirements and relevant Codes of Practice (e.g. HSNO COP 44 and 45).

Compliance will also be achieved with the Z Energy Limited Specification for the installation and removal of UPSS systems and dispensing equipment.

### Physical Prevention Measures

The proposed tanks are double-contained fibre glass tanks manufactured to an Environmental Protection Agency approval. Additional bunding and/or containment are not required for double-skinned tanks.

Standard physical mitigation measures include locating the pumps on concrete islands and the nozzles being fitted with breakaway couplings, which automatically cut off fuel supply in emergencies. This minimises spillage resulting from careless operation or damage to nozzles.

### Spill Mitigation Measures

Z Energy has a standard series of site management plans for its refuelling facilities. These are detailed where necessary to suit each particular site. These include:

- Site Drainage Layout, which will be prepared at the time of Building Consent;
- Emergency Spills Procedures; and
- API Emergency Procedures

The site drainage layout is contained in **Annexure 2** (1-04).

The following **strategy for addressing spills** is currently followed and is to continue on the site:

- The basic strategy for all spills is to firstly remove any source of ignition

- Spill kits are accessed and absorbent material placed on the spill. The use of degreasers or detergents and other liquids is minimised to reduce any effluent.
- Spill quantities are contained with the sealed area and can be contained within a temporary sock bund kept in the spill kit and subsequently recovered.
- Spill kit material after use is transferred to an appropriate waste storage area.
- Contaminants are to be recovered to the extent practicable
- Any effluent or contaminated materials are disposed of to a recognised waste disposal facility.
- During the incident, other vehicles are stopped from accessing the immediate area.

All tanker drivers are trained in spill response procedures. As this is an unmanned refuelling facility adequate signage is provided to aid individuals in mitigating spill effects.

In the event of spill emergencies appropriate contaminant and clean up measures are taken. Spill kits are easily identifiable and retained on-site and in an immediately accessible location. Where spill kit material is used material must be replaced immediately.

In this context, the increase in storage volume on site does not alter or change the risks associated with spill management.

## **Maintenance**

Z Energy has authorised maintenance contactors who inspect and maintain the concrete slabs on-top of the tanks, the drainage system, and the proposed API interceptor. The API interceptor will be cleaned annually or more frequently if necessary.

## **5.8 Airports**

There are specific assessment criteria in the Plan pertaining to Airports. These are addressed below:

### **xvi Discretionary Activity - Airports**

(a) The extent to which noise from aircraft is/will:

(i) compatible with the character of the surrounding area. *There are no additional noise effects for the operation of the proposed activities (aircraft refuelling). It can be considered that, being a 24/7 airport, construction noise will not generate any more effects on the character of the surrounding area than construction will.*

(ii) adversely affect the pleasant use and enjoyment of the surrounding environment by residents and visitors. *There will be no adverse effects beyond the site. The activity is simply servicing of aircraft currently using the site and a replacement and upgrade of existing facilities to ensure greater efficiency.*



(iii) adversely affect the quality of the experience of people partaking in recreational and other activities. *There will be no change in the quality of anyone's experience.*

(b) The cumulative effect of a dispersed number of airports. *The activity is one which occurs within an aerodrome and is not one which would generate cumulative effects of this nature.*

(c) Convenience to and efficient operation of existing airports. *The activity will improve convenience to and efficient operation of the airport. This is the impetus for the works.*

(d) The visual effect of airport activities. *Proposed and existing refuelling activities both remain hidden behind the existing hangars and buildings. The visual impacts are not pragmatic to assess for the underground portion of the proposal. The visual effects of the above ground construction / activities (i.e. stockpiling and batter) have been assessed in section 5 of this proposal.*

(e) The frequency and type of aircraft activities. *The activity will not affect this. It will only increase the efficiency of refuelling of aircraft that are already at / using the site.*

(f) Assessment of helicopter noise pursuant to NZS 6807: 1994, excluding the levels contained in Table 1 of Section 4.2.2 to the intent that the levels specified in Table 1 do not override the noise limits specified in Rule 5.3.5.2.v(a). *Not applicable.*

## 5.9 Conclusion

The subject site has been used as an airfield (and therefore an aircraft refuelling facility) for many years. The proposed works involve the removal of one 50,000 litre Avgas tank, the installation of two new double skinned fibre glass 50,000 litre underground storage tanks and an API interceptor, stockpiling of excavated material and the removal and decommissioning of an existing Avgas UPSS. The installation of the new UPSS will, overall, reduce the risks associated with the aircraft refuelling activity.

The works will be designed to the high standard adopted by the New Zealand Oil Industry at refuelling sites throughout New Zealand. Such a standard represents best practice that is unlikely to result in adverse effects on the environment.

Measures will be undertaken in order to ensure that any potential additional adverse effects associated with the activity relating to earthworks, stockpiling and the use and storage of hazardous substances are appropriately mitigated. Accordingly the proposal can be accommodated satisfactorily with less than minor adverse impacts on the environment, given compliance with all relevant statutory and industry standards.

Overall, having regard to the existing airport operations on the site and the temporary nature of the proposed works, it is considered that the effects of the proposal can be appropriately managed and that longer term, the adverse effects on the environment will

be less than minor. Alternative locations have not been considered as the site contains an existing aircraft refuelling facility which forms part of the existing environment. Furthermore, the aircraft refuelling facility has been determined with the Wanaka Airport Manager and Queenstown Airport Corporation to ensure best fit for airport operations now and for the future.

## 6.0 STATUTORY CONSIDERATIONS

Part II of the Act states its purpose and principles. Part II encourages decision makers to ensure that the granting of resource consents promote the sustainable use of natural and physical resources.

In this case, granting consent would not be contrary to the purpose and principles of the Act. The foreseeable needs for future generations will not be foreclosed by the proposal, which seeks to undertake maintenance works to a well-established activity.

The activity does not require consent under the NES as the volume of soil associated with the tank replacement activity and soil disturbance both meet the permitted activity threshold of the NES.

The proposal requires consent in accordance with the operative District Plan as the increase of hazardous storages and required earthworks both exceed their respective permitted criteria. Less than minor adverse effects are anticipated, and therefore any possible pressures on the environment will be avoided, remedied or mitigated.

The provisions of the relative District Plan (which establishes long term goals and objectives) will not be compromised. The relevant provisions relate to hazardous substances and earthworks.

Section 16 of the Plan seeks to avoid, remedy or mitigate the adverse environmental effects arising from the use of land for the use, storage, transportation, manufacture, and disposal of hazardous substances. The purpose of the District Plan is not to avoid the use of hazardous substances, but rather to manage their risk. The risks associated with the use and storage of hazardous substances at refuelling facilities are well known and regulated to manage risk. The development and operation will meet all the requirements of the HSNO Act and accepted industry standards. Appropriate operational and managerial practices will be adopted for handling and storing hazardous substances, including spill response procedures to address the protection of people and property and the management of spill and/or emergency situations.

The policy provisions relevant to earthworks are contained in Section 4 of the District Plan and in proposed Plan Change 49 (PC49). PC49 proposes to consolidate the majority of the earthworks provisions into one section of the District Plan. The policy intent of the

earthworks provisions remains similar between the two documents, but the proposed rules are intended to be more permissive. PC49 is at a relatively early stage of the process. The question of weighting is of little relevance in terms of the policy provisions as the key policy intentions of the District Plan and PC49 are not in conflict. For completeness, the rules of PC49 have no legal effect.

In essence the earthworks provisions seek to enable earthworks that are a necessary part of subdivision, development and access, provided they are undertaken in a manner that does not adversely affect communities and the natural environment. The sides of the pits are stabilised for safety and to ensure adjacent land is not undermined. Earthworks are generally considered to be a natural, albeit irregular and temporary, part of any developed environment. Nuisance (eg: dust) and pollutant effects from earthworks can be appropriately mitigated through management practices. The site is relatively flat and appropriate erosion and sediment control measures will be implemented. All earthworked areas will be covered in hardstand or landscaped (realignment of the existing grassed batter) as part of the development, and the earthworks themselves would not affect landscape or visual amenity values.

Specifically, the proposal would promote sustainable management through:

- Enabling people and communities to provide for their wellbeing;
- Maintaining the appropriate amenity values;
- Maintain the quality of the environment; and
- Encouraging the continued use of the site in an efficient and effective manner.

The effects of the proposal on the environment will be less than minor in nature. It is in my opinion that the application can be granted without notice, seeking only the additional written approval from the designated authority to carry out the works (note we have been informed this will occur upon our lodgement of this application). Note that the written approval for the proposed works has been obtained from the Operations Manager at Wanaka Airport (Ralph Fegan – refer to **Forms**).

On the basis of the analysis contained herein, and having regard to the proposal, the site and its immediate environs; and the nature and scale of the potential effects of the activity it is considered that the proposal satisfies the requirements of part II and Section 104 of the Act and as such it is considered appropriate to grant consent sought.

Section 108 of the Act provides that in approving applications for a **discretionary activity**, the Council may impose conditions of consent in accordance with the matter that the Council has specifically restricted its discretion. It would be expected that any conditions relate only to ensuring that the proposal is undertaken as outlined herein.

## 7.0 CONCLUSION

The proposal by Z Energy for the installation of a new UPSS supplying a relocated Avgas and new Jet fuel storage facility, providing dispensing facilities for the Alpine Deer Group, the removal and decommissioning of an existing 50kL Avgas underground tank and the stockpiling of excavated material requires a consent as a **discretionary activity** under the NES and Operative Queenstown Lakes District Plan. Works can be appropriately managed such that the effects will be less than minor. It is therefore considered appropriate for the QLDC to grant resource consent for this activity, as sought.

**APPENDIX 3 - ENVIRONMENTAL MANAGEMENT PLAN**

# Annexure 3

## Environmental Management Plan for Site Works

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**ENVIRONMENTAL MANAGEMENT PLAN  
FOR SITE WORKS AT PETROLEUM HANDLING FACILITIES**



**ENVIRONMENTAL ENGINEERING**

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<b>ISSUE</b>	<b>DATE</b>	<b>COMMENTS</b>	<b>PREPARED BY</b>	<b>APPROVED</b>
Rev1	19/5/08	Final	M Robertson	R Renouf/N Moon
Rev2	2/6/10	Naming	M Robertson	N Moon
Rev3	14/4/11	Incl all site works	M Robertson	A Lukey
Rev 4	19/5/11	Z Energy and PDP edits	M Robertson	A Lukey
Rev 5	26/6/13	Z Energy and PDP Edits	M Robertson	
Rev 6	31/04/14	Z Energy and HSSE Edits	T Evans-Tracey	M Robertson

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## 1 Introduction

Z Energy Limited (“Z”) has prepared this Environmental Management Plan (“Plan”) to detail environmental management measures which are to be implemented during site works on petroleum handling facility sites. The Plan has a particular emphasis on works to remove underground petroleum storage systems (“UPSS”) and works likely to encounter contaminated soils but is applicable to earthworks generally.

A UPSS removal will include removal of the UPSS itself and may include removal of the tank bedding material and the natural ground material from beneath the fuel dispensers and the base of the tank pits.

Intrusive site works such as tank installations, site rebuilds and maintenance of underground services will also have potential to encounter hydrocarbon impacted soil that would require management.

The key objective of the Plan is to identify and outline specific measures to be undertaken during intrusive works to prevent adverse environmental impacts occurring.

All works will be undertaken to minimise impacts on the environment and will comply with relevant legislative requirements, licences, approvals and notices.

The site condition will be benchmarked at the completion of the UPSS removal by soil sampling from the excavations carried out as part of the removal. Results will be compared to relevant guidelines to determine if further works are required. Further investigation and/or remedial works related to contamination encountered may be subject to a separate consent application.

## **2 General Requirements to Protect the Environment and Minimise Nuisance**

### **2.1 General**

- ❑ The contractor shall comply with:
  - Applicable planning and building Laws
  - All conditions of any consents issued (note that these may affect the obligations in this document)
  - All applicable rules of any regional, town or district plans
- ❑ The contractor shall ensure that the works are carried out in such a manner to minimise any adverse effects on the environment and the normal operation of the business and life of others.
- ❑ The contractor shall ensure that all materials and equipment removed from the site are either, stored; or disposed of legally and responsibly.

### **2.2 Heritage and Landscape**

- ❑ Unless the contract indicates otherwise the contractor is required to protect any significant, vegetation, structures and landscape features from damage.
- ❑ The contractor shall not remove, trim, damage or work within the dripline of any tree without checking for any operative tree protection provisions and/or approved resource consent for those works.
- ❑ If evidence is encountered of any historically significant previous occupation of the site, the contractor shall take immediate provisions to stabilise the evidence and notify appropriate authorities and the Engineer so that an archaeological assessment / approval can be carried out to the extent required.

### **2.3 Resources**

- ❑ The contractor shall not waste water.
- ❑ If water restrictions are in place then the contractor shall implement a water conservation plan.
- ❑ The contractor shall not waste electricity.
- ❑ If electricity restrictions are in place then the contractor shall implement an electricity conservation plan.

## 2.4 Contamination

- If a pre commencement site investigation reveals, or contamination can be reasonably expected, (such as in tank removal operations); then the contractor shall develop a plan with the Engineer to handle, and dispose of the contaminants. This plan shall include any required testing, precautions, and disposal location and documentation.

### 2.4.1 *Contamination to soil*

- The Contractor has a duty to ensure that contamination of soil does not occur. In the event of any contamination occurring through the actions on site the contractor shall take immediate steps to contain and recover the contaminated material.
- In the event that the contractor discovers a previous contamination or if the contamination is such that it causes an immediate hazard or cessation of work then notification shall be made immediately to the Engineer.

### 2.4.2 *Contamination to water*

- The Contractor is to ensure that no liquid passes from the site except to an appropriate and approved receptor.
  - Silt. The contractor shall ensure that effective silt traps to maintain the quality of site runoff water to that of normal rainwater runoff are in place. These must be properly maintained. Also refer to Section 11.
  - Concrete Washings. Concrete cutting slurry and concrete cooling water are Ecotoxic. The contractor shall ensure that run off of such water does not enter any storm water system, or natural drainage system. Such water can be diverted to an unsealed area for natural soakage, or filtered using hay bales or filter cloth and disposed of to sewer with the approval of the territorial authority, or collected and disposed of by a reputable trade waste contractor.
  - Asphalt Cutting. All wastewater must be disposed of to sewer with the approval of the territorial authority, or collected and disposed of by a reputable trade waste contractor.
  - Hydrocarbons. These may be pumped into an operative hydrocarbon separator with approval from territorial authority, or otherwise a Vacuum Truck with the appropriate Dangerous Goods Rating shall be used to take the material to an approved location.

## **2.5 Nuisance**

- ❑ The contractor is to conduct their work to minimise the creation of nuisance to others on the site, neighbours and the general public.

### **2.5.1 Noise**

- ❑ The contractor is to select, operate and maintain their plant and equipment to minimise noise nuisance. On some projects or sites there may be a requirement to implement a Construction Noise Management Plan. This may involve undertaking noisy tasks outside sensitive hours and may impose a restriction on working hours.
- ❑ Noise levels shall not exceed any levels imposed by law or by project specific consent.
- ❑ Also refer to Section 16.

### **2.5.2 Dust**

- ❑ The contractor is required to operate an effective dust suppression regime.
- ❑ Also refer to Section 15.

### **2.5.3 Site Management & Appearance**

- ❑ The contractor is required to keep the site neat and tidy, and to arrange his plant, materials, and any rubbish areas in a way that minimises any adverse appearance and inconvenience to others.
- ❑ Hazardous materials and/or flammable liquids must not be stored in areas that contain flammable materials.
- ❑ The contractor is required to remove all rubbish and unwanted materials and spoil promptly.
- ❑ The contractor is to ensure any damage caused by the works, including damage to planted areas and lawns is repaired in a timely manner.
- ❑ The contractor is to remove from the site all left-over materials, rubbish, and spoil promptly at the completion of the project, and leave the site clean and tidy to the Engineer's satisfaction.

## 2.6 Compliance with Relevant Standards for Intrusive Works

Intrusive site works (refer Section 3) shall be undertaken in accordance with the following guidelines:

- ❑ Department of Labour 1992 Code of Practice for the Design, Installation and Operation of Underground Petroleum Storage Systems (“DOL COP”).
- ❑ Environmental Protection Agency, May 2012, Below Ground Stationary Container Systems for Petroleum – Design and Installation HSNO COP 44. (“EPA COP44”).
- ❑ Environmental Protection Agency, May 2012, Below Ground Stationary Container Systems for Petroleum – Operation HSNO COP 45 (“EPA COP45”).
- ❑ Ministry for the Environment 1999 Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand (“MfE Guidelines”).
- ❑ Hazardous Substances and New Organisms Act 1996 (“HSNO”).

### 3 Intrusive Work Scope

The decommissioning of a typical UPSS system involves:

- ❑ Acquiring appropriate consents/permits from regional and/or local authority (where necessary).
- ❑ Removal of above ground equipment and, for site exits, debranding (removal of logos and colours).
- ❑ Concrete cutting and breaking.
- ❑ Excavation and exposure of UPSS elements (tanks, lines, fill points).
- ❑ Removal of UPSS elements for off-site disposal/destruction.
- ❑ Excavation of any hydrocarbon impacted soils adjacent to the UPSS.
- ❑ Disposal of any hydrocarbon impacted soils to Z approved facilities.
- ❑ Validation sampling of excavations.
- ❑ Backfilling.
- ❑ Re-surfacing.

Tank installations

- ❑ Concrete cutting and breaking.
- ❑ Sheet piling (where required).
- ❑ De-watering (where required).
- ❑ Excavation of the tank pit and trenches.
- ❑ Disposal of soils to Z approved facilities.
- ❑ UPSS installation.
- ❑ Installation of related infrastructure (e.g. interceptors).
- ❑ Backfilling.
- ❑ Re-surfacing.



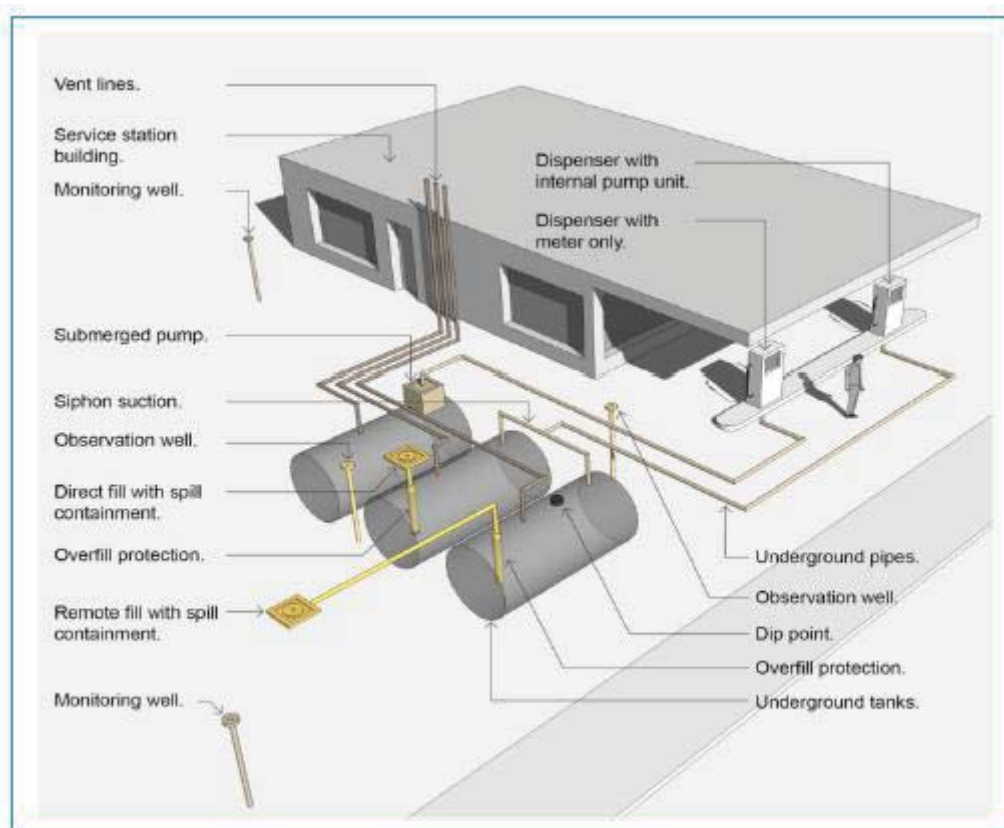
## **4 General Civil Engineering Works**

The general civil engineering works associated with the UPSS removal, UPSS installation or intrusive works will be completed in accordance with industry practice and will be subject to additional controls specific to work on petroleum handling sites. Experienced petroleum industry contractors will complete the works under Z's rigorous Permit to Work system. This system requires Contractors to identify potential HSE risks and implement measures to protect workers and the environment.

Furthermore, as required by health and safety legislation, a comprehensive Health and Safety Plan is developed prior to commencement of works and all contractors review this prior to starting at the site. Each operator at the site must be inducted in terms of health and safety requirements (including hazards) at the site, and each person is then required to confirm (by signature) that they have understood these requirements.

## 5 Removal of the UPSS

The UPSS will be removed by an appropriately licensed contractor. The UPSS removal will include the existing system and any elements from historical UPSS systems that may still be in place. Removal of the UPSS will require concrete cutting and breaking and excavation of soil. The removal will be completed in compliance with the DOL COP, EPA COP44 or EPA COP45 as applicable. A typical service station UPSS is illustrated in the Figure below (taken from HSNOCOP 44, version 1.1 June 2013 (Figure 10.9(1) Tank Installation (Typical))).



The tank will be inerted by using nitrogen to displace any volatiles inside the tank. The tank is then removed from the pit by either crane or excavator.

Once the tank is removed the environmental consultant visually inspects the tank and pipework for any defects which may indicate potential loss of containment.

Signage as determined by HSNOCOP is marked on the tank which is then transported off site for disposal or destruction.

## 6 Removal of Soils and Fill

During the UPSS removals, UPSS installations or other intrusive site works potentially hydrocarbon impacted soils may be exposed.

The potentially hydrocarbon impacted soils may comprise:

- ❑ Bedding and surround material (typically sand or pea metal) for lines and tanks.
- ❑ Fill and natural soils from beneath fuel dispensers and fill points.
- ❑ Natural soils in immediate proximity to the UPSS.
- ❑ Soils adjacent to former UPSS elements (older tanks or lines that have since been replaced).
- ❑ More widespread soils if identified during the UPSS removal and accessible for excavation.

These hydrocarbon impacted soils will typically be removed through excavation. Typical soil removal volumes for a UPSS removal are 20m<sup>3</sup> to 100m<sup>3</sup> per tank. Larger volumes sometimes require removal where there has been some form of product loss at the site. When assessing the potential effects of the activity which is the subject of a Resource Consent, consideration should be given to the possible range of excavation volumes, including an allowance for unforeseen removal if required as part of the UPPS removal works. It may not be feasible or necessary to remove all the hydrocarbon impacted soils from the site.

In addition to replacing any contaminated soil that is removed, imported clean fill will be used to fill the voids left by removal of the tanks. Typical tank volumes range from 5m<sup>3</sup> for commercial sites to 100m<sup>3</sup> or more for large retail sites.

Tank installations (including within new locations within a site) typically require larger scale earthworks.

Site rebuilds may also require excavation of footings and regrading to new site levels to facilitate pavement construction.

## 7 On-site Soil Management

Excavated soil is generally not re-used on-site although opportunities to do this will be assessed on a case by case basis. All soil excavated as part of intrusive site works that requires off-site disposal will be disposed of at an appropriate off-site licensed waste management facility. However, it may be necessary for excavated soil to be temporarily stockpiled on-site prior to off-site removal.

### 7.1 General

- Priority is to be given to protection of adjacent watercourses and stormwater drains.
- A plan should be prepared for the site which details the location(s) and nature of the erosion and sediment control device(s), having regard to the anticipated extent and quantity of earthworks. Unless required as part of the resource consent process, these plans are to be prepared by the contractor to meet the requirements of the site, and the local council (as relevant). The site specific plan is to be available on site at all times during the earthworks, and is to be reviewed and amended if required upon the commencement of, and during, the works.
- Most works undertaken at Z sites (eg: UPSS removal, service station installations) can be categorised as being small earthworks jobs (<1,000m<sup>3</sup>, <0.25Ha exposed area). Sites where greater quantities of earthworks are to be undertaken may need to be staged and/or to require a more detailed site specific erosion and sediment control plan. If a more detailed erosion and sediment control plan is required, it should be prepared in accordance with Auckland Council Technical Publication 90 (TP90)) or other more relevant guideline.
- Earthworked areas are to be stabilised as soon as is practical so as to minimise erosion potential on site.
- The primary mechanism for sediment spreading on the site is spillage during excavation and tracking by machinery. Any soils tracked beyond the site boundary should be swept up promptly and appropriately disposed of.
- Where practical, material shall be loaded directly onto trucks for disposal, to minimise tracking of material about the site.

### 7.2 Perimeter Controls

Perimeter controls serve a dual purpose:

- To prevent sediment transport off the site.
- To prevent excessive overland flow (from upstream catchments) onto/from the site, if applicable.

Staging of earthworks may potentially reduce quantities of perimeter controls required at the site. Consideration should be given to filter (or silt control) socks as perimeter controls. If re-using filter socks they should be visually inspected for integrity before installation. A visual assessment of the through-flow capacity of the filter sock should be undertaken (including, if possible, during a rainfall event in the course of the project).

Perimeter controls should be checked for integrity following a major rainfall event, and replaced if required.

### **7.3 Detention Devices**

For small earthworks (<1,000m<sup>3</sup>, <0.25Ha) and typical Z sites (i.e. flat sites with low sediment generation potential), stormwater detention devices are generally not required. For large earthworks projects, or where sediment generation potential is high at the site, detention devices and erosion/sediment controls outside the scope of this plan may be required. If specific erosion and sediment control measures are required, these should be prepared in accordance with Auckland Council Technical Publication 90 (TP90) or other more relevant guideline.

### **7.4 Stockpiling**

All measures shall be taken to ensure prompt removal from the site of any material that is known to be heavily impacted with petroleum hydrocarbons and particularly if material is odorous. Temporary stockpiling of such material within the excavated pit may be undertaken. Prompt disposal of impacted material from the site will minimize the potential for impacted sediments to enter watercourses/stormwater systems and/or further contamination of soils.

Stockpiles are generally short term and tend to be carted off-site on the same day or the day following excavation. Where necessary (e.g. for long term stockpiles of lightly impacted or clean spoil), perimeter controls may be installed around the stockpile itself to prevent sediment transport from the stockpile area. The stockpile area should be managed (eg: fenced) to prevent public or unauthorised access.

All stockpiles should be kept tidy, less than 4m in height and with a stable slope.

Any stockpiled material should be dampened, or covered with an impermeable material (as per odorous material (refer below)) to prevent dust nuisance. Dampening of stockpiles should be such that excess water is not generated as a result, which would itself require appropriate management. Stockpiles are to be covered with polythene sheets, or similar, during rain events or windy conditions to prevent stormwater discharge or wind-blown dust generation.

Any potentially hydrocarbon impacted soil excavated and temporarily stockpiled on the site is to be managed in a manner protective of on-site workers, the public and off-site migration pathways such as stormwater drains.

Potentially hydrocarbon impacted material that must be temporarily stockpiled on-site should be stored on concrete hard standing or polythene sheets to minimise potential leaching of any soil contaminants to underlying soils. In some cases it may be appropriate to temporarily stockpile material back in the originating pit while awaiting soil test information to determine the disposal facility.

Hydrocarbon impacted material is to be disposed of in accordance with Section 7.6.

Imported fill required for backfilling excavations may be temporarily stockpiled in a designated, clean area on site. All imported fill is required to be free of contaminants.

## **7.5 Dust Management / Odour Management**

Stockpiled material may be wetted down or covered to limit dust generation potential.

Where stockpiled material is odorous, it should be covered with an impermeable material (e.g. polythene) or other form of odour suppression (e.g. application of odour suppressant compounds) to limit the potential release of odours.

## **7.6 Removal / Disposal of Materials**

All trucks / plant carrying excavated materials off-site are to be securely covered, with wheels cleaned (eg: brushed or washed) before leaving the site. Trucks should proceed directly to the landfill.

All trucks transporting material from Z sites must be accompanied by an approved Z Manifest form. The Manifest form has details of the materials origin onsite, disposal destination, load weight details and authorisation of the environmental consultant. It is the responsibility of the contractor to ensure that the Manifest is completed and returned to the appropriate contact designated on the Manifest.

## 8 Requirements for Off-Site Soil Disposal

Should soil disposal be required as part of the intrusive works, it will be disposed to a facility consented to receive such wastes.

Relevant controls include:

- ❑ Sampling and laboratory analyses of representative samples of soil to be disposed (may be omitted depending on disposal facility requirements),
- ❑ Where necessary, comparison of analyses results with relevant facility limits,
- ❑ Formal approval from Z Environmental Manager before any soil can leave site,
- ❑ Formal approval from the landfill operator/local authority, and
- ❑ Completion of waste manifest forms to document the soil chain of custody and final disposal location.

## 9 Environmental Testing

As part of the earthworks to be carried out in association with the excavation and removal of a UPSS, Z's environmental consultants will carry out soil and groundwater validation testing. The results of this testing will be reviewed in accordance with the MfE Guidelines and may result in subsequent environmental investigations being carried out by Z.

The UPSS removal does not constitute a complete environmental assessment of the site. The net result of exercising the standard UPSS removal scope may be that the site complies with relevant guidelines and does not require further remediation. Alternatively the results of the soil and groundwater validation testing referred to above may indicate the need for subsequent environmental investigations by Z. Any such environmental investigations will be carried out in accordance with the MfE Guidelines and will determine whether any remediation/management is required to ensure that any potential hydrocarbon impact, which is directly attributable to Z's use and occupation of the site, is acceptable under the MfE Guidelines for the continued use of the site consistent with its current zoned land use. Any such environmental investigation will also take into consideration the receiving environment (e.g. groundwater sensitivity and nearby surface waterways).

Z will generally commission a more limited scope environmental assessment for greenfield tank installations and minor intrusive works. In some cases no sampling will be required, but an environmental consultant will be on notice to attend in the event that unexpected impact is detected.



## 10 Excavation Safety Management

The following table details the potential hazards which may exist at the site. The associated risk control methods are also outlined:

Hazard	Risk Control Action Required
Open excavations of a depth greater than 1.5 metres which have not been shored, battered or benched may collapse or present a fall hazard.	Limit entry to excavations greater than 1.5m unless suitably safeguarded.  Erect barricading and signage. Close off site with security fencing and appropriate signage erected to restrict entry by members of the public.
Open excavations in close proximity to a public footpath and roadway which have not been shored, battered or benched.	Restrict access to the footpath by members of the public as required.  Prevent public access to the site.  Backfill excavations as soon as possible in a safe manner.
Uneven ground which may present a roll-over risk to plant and machinery.	Minimise working on, or the traversing of, uneven ground and exercise extreme care when required to do so.
Rubble and soil which presents a potential slip/trip-hazard to workers.	Keep the work-site tidy and ensure good house-keeping practices. Protective footwear is to be worn at all times.
Hydrocarbon vapours emitted from potentially impacted soils have the potential to cause nausea and dizziness to workers on-site or nuisance to neighbouring properties if present in high concentrations.	Where possible workers are to be located upwind of contamination and measures implemented such as covering impacted stockpiled soils.
In extremely low wind conditions, hydrocarbon vapours emitted from potentially impacted soils may accumulate in excavations or depressions. Hydrocarbon vapours are heavier than air and will displace oxygen. Explosion or suffocation hazards may be present may result.	In periods of low wind, testing of air concentrations may be required and ignition sources should be restricted as a matter of course in the proximity of excavations where hydrocarbon impact is present. Access of persons to excavations or depressions of any depth should be restricted until air testing shows acceptable and stable conditions exist.
Entry and exit of trucks and other vehicles to the site is restricted by the presence of excavations which	Keep the work-site tidy and ensure good house-keeping practices. Erect barricading and signs to restrict access to open

may restrict the ability of those vehicles to manoeuvre on-site.	excavations. Spotter to be used to assist in vehicle movements onsite.
Moving machinery with limited fields of vision may lead to collision with workers.	Hardhats and high visibility vests are to be worn.  Eye contact and communication must be established prior to entering within the work or swing areas of moving equipment. Equipment to be stopped before entering the work or swing area and equipment to remain stationary until personnel have left the work area.  Spotter to be used to assist in vehicle movements onsite.
Machinery noise may present a hazard to workers in proximity to equipment.	Hearing protection to be worn when operating or adjacent to loud machinery.

## **11 Surface Water Management**

In order to ensure adequate water management, clean water (i.e. stormwater) will be diverted away from excavations and stockpiles. All erosion and sediment control measures (see Section 7.2 and 7.3) shall be operational prior to works commencing on the site.

Shallow perched water and stormwater may collect in open excavations. Potentially hydrocarbon impacted perched water may be encountered, particularly in excavations associated with infrastructure removal. In the event that potentially impacted water is encountered, this water may be removed, if necessary to assist in infrastructure removal, and transported to a licensed waste treatment facility. Records on the quantity of water removed will be retained.

## 12 De-Watering

Where groundwater is encountered in tank removal excavations, excavation will generally be limited and dewatering activities will not take place. If remedial excavations beneath the water table are required then specific measures will be put in place to ensure the stability of excavations below the water table and de-watering will be subject to site specific controls that must be agreed and approved by the relevant local or regional authority.

De-watering is more commonly required during tank installations. Where excavations extend beneath the water table, de-watering will be carried out in a carefully controlled manner as necessary to facilitate the installation of tanks and services.

The specific dewatering procedure will depend on likely groundwater yield and the degree to which the water has been impacted by hydrocarbons (if any). AZ Energy has adopted a dewatering process that should be employed on-site. Observational monitoring is required, and must be recorded. In general the approach will consist of elements from the following sequence:

- ❑ Installation of sheet piling (reducing horizontal groundwater inflow).
- ❑ Well pointing to draw the water table down in advance of excavation below the water table (note that water is typically drawn from beneath the water surface and is therefore typically much cleaner than shallow water which is impacted by agitation of soil and any hydrocarbons floating on the water surface).
- ❑ Sump pumping – in some instances a pump in the excavation is sufficient for de-watering. Care is taken to submerge the pump in an excavated sump in the pit corner to minimise turbidity and entrainment of floating hydrocarbon emulsions. In some cases (e.g. sites with high fines content) the sump may include a casing and pea gravel and filter cloth to filter fines.
- ❑ Dewatering at an initial high rate to effect water table drawdown followed by a period of “maintenance pumping” at a lower rate to maintain the drawdown.
- ❑ Discharge of water through a treatment train comprising elements such as:
  - Phase separation by pump intake positioning below any floating hydrocarbons and/or
  - Aeration to reduce dissolved volatiles and/or
  - Gravitational separation (e.g. in a mobile multi compartment settling tank) and/or

- Sorbent booms and/or
- Filtration sock or hay bale weir and/or
- Discharge through site API
- ▣ Excavation of impacted soil and, if required, skimming (by an authorised contractor) to remove floating emulsions and product.

Where impact is anticipated or detected, the requirements of the relevant local or regional authority must be met and an environmental consultant can assist the contractor in determining the receiving environment and/or final treatment train.

## 13 Hazardous Materials, including Chemicals and Asbestos

### 13.1 Storage, Use or Contact

- ❑ Storage and use of any Hazardous materials shall be in accordance with the law. The contractor shall be familiar with the requirements of any such laws.
- ❑ All storage tanks or containers of petroleum products, chemicals and corrosives must be clearly labelled indicating the nature of the contents. If necessary barricade or tape off areas where these are stored.
- ❑ Material Safety Data Sheets should be held by the contractor for all hazardous substances held or used at the site.
- ❑ All areas where hazardous substances are stored or used or present must be clearly marked as such.
- ❑ If Asbestos materials are suspected or known to be on the site then appropriate precautions must be taken. If in any doubt then an asbestos survey should be carried out prior to commencing demolition to ensure clear identification of where asbestos is present.
- ❑ If while work is being carried out and contractors suspect/uncover asbestos all work in that area is to be stopped immediately until an asbestos survey has been conducted and appropriate precautions determined.
- ❑ Any Works involving contact with Asbestos products must be carried out in accordance with law and require a Permit to Work.
- ❑ Any building suspected or known to have been built and/or modified prior to 1980 may have lead based paint. If in any doubt testing of surfaces should be undertaken prior to commencing demolition and if positive appropriate precautions taken.

### 13.2 Spill Response

- ❑ The contractor is required to maintain on site in a container labelled "Spill Kit" or similar, appropriate materials and equipment to deal with any reasonable spill event.
- ❑ In the event of any spill the contractor shall take immediate steps to minimise the effects
- ❑ This shall include:
  - Immediate containment and if possible, recovery.
  - Immediate notification to Z Energy and appropriate emergency response staff.
  - Provide full assistance to Emergency Response Staff

- Reporting to Z Energy of the incident as per the call tree
- The contractor shall provide reasonable assistance to any other parties on the site that suffers a spill event.
- The above applies to spills of over 5 litres only unless spill is directly to ground or over Z Energy's boundary. In these cases all spills shall be reported.

## 14 Air Quality Management

The primary source of potential odour issues is expected to be associated with hydrocarbon vapours that could potentially be released from the walls and floors of open excavations and from soil stockpiles where potentially hydrocarbon impacted soil is exposed. The actual concentrations of any air emissions will vary depending on weather conditions, type of fuel (e.g. petrol or diesel), the composition of the soils and the degree of any potential hydrocarbon impact. Air emission and odour controls will be used to limit the potential for nuisance odours. Vapour levels will be monitored by contractors to identify any potential hazards.

If considered necessary by Z and/or the environmental consultant, the following vapour/odour management procedures could be used:

- ❑ Undertaking the excavation works in a staged manner to limit the surface area of potentially odorous material exposed.
- ❑ Wetting-down of excavations.
- ❑ Application of odour suppressants.
- ❑ Covering any portion of the site that is generating odour to reduce the odours.
- ❑ Covering stockpiled soil with polythene sheeting to suppress the potential release of odours.
- ❑ Considering backfilling excavations at end of days work.

Excavation works are typically of short duration and odour effects (if any) will be temporary.



## 15 Dust

Excavation and stockpiling of soil and on-site vehicle movements are potential dust generating activities. Where appropriate, the generation and impact of dust on the surrounding environment can be minimised by undertaking the following measures:

- ❑ Advise all site workers of the need to minimise dust by the responsible operation of machinery.
- ❑ Suspending or limiting dust generating activities during periods of high wind.
- ❑ Using water on exposed soil (excavations and stockpiles) to suppress dust, ensuring that any water used is not allowed to migrate off-site by the stormwater, sewer, or any other means.
- ❑ Covering areas of exposed soil with polythene sheeting.
- ❑ Ensuring that all trucks transporting fill material to site and removing soil/material from the site are covered and vehicle tyres are adequately cleaned prior to departure from the site.
- ❑ Sweeping up any soil left on site sealed surfaces.

## 16 Noise Management

Noise will be generated by normal earthworks activities such as concrete breaking, soil excavation and truck movements. It is expected that the equipment to be used during the UPSS removal will not generate unacceptable levels of noise. Z's contractors will endeavour to keep noise levels to a minimum.

Tank removal and minor intrusive works tend to be of short duration and any noise effects will be temporary.

Tank installations have a similar noise profile although sheet piling, if required, has potential to generate higher levels of noise. Again this is of relatively short duration.

Where site specific restrictions on working hours are in place, these shall be met. Otherwise the potential for any noise nuisance will be minimised by:

- Controlling construction noise by reference to NZS 6803:1999 Acoustics – Construction Noise,
- Limiting noise producing site works to normal working hours with no noise producing work occurring on Sundays/Public Holidays, and
- Avoiding unnecessary noise, such as loud radios and public address systems.

## **17 Equipment Control Measures**

Equipment and plant to be used on site during the works has the potential to create a hazard to both site personnel and the environment. Equipment and plant should only be operated by competent, trained and licensed personnel, and should be maintained regularly. All plant and vehicles should be regularly inspected and, if necessary, cleaned to prevent the removal of soil on vehicles leaving the site. All vehicles and plant should be driven carefully within the site to help prevent loss of materials during loading, transporting and unloading of soil and/or other materials to be removed from site.

## 18 Affected Parties

As the works involve removal of Z owned equipment which is generally on privately owned land and the effects beyond the boundary are expected to be short term and less than minor, consultation with external parties is not considered to be necessary. Standard site control measures will be implemented as follows:

1. The following information will be posted in a visible location on-site:
  - Name of site manager;
  - Contact details for Site Manager; and
  - Work Hours
  
2. The Site Manager will maintain daily records, including the following:
  - Location and type of machinery;
  - Weather;
  - Any complaints / contacts received; and
  - Mitigation / follow up measures taken in response to complaints / contacts.

## 19 Recommended Conditions

It is recommended that the following conditions be agreed with the relevant authority to demonstrate Z's commitment to controlling the potential adverse effects of intrusive site works:

### *UPSS Removals*

*"The site shall be assessed by an independent consultant in accordance with the Ministry for the Environment Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand, June 1999. The assessment report shall be provided to the Regional and Territorial Authority within 30 days of receipt of the final report from the consultant."*

### *All Intrusive Works*

*"All works shall be completed in general accordance with the latest version of the Z Energy Ltd document Environmental Management Plan For Site Works at Petroleum Handling Facilities"*

*"Areas of exposed soil shall be rehabilitated (in handstand or landscaping) once the works are complete".*

# **GENERIC MAINTENANCE/EXCAVATION WORKER PLAN FOR AREAS WITH POTENTIAL HYDROCARBON CONTAMINATION**

## **Introduction**

### **Purpose of the Plan**

The purpose of this Plan is to provide a guide for maintenance/excavation (M/E) workers in managing issues associated with, and hazards posed by residual petroleum contamination that may be present in the subsurface soils and groundwater.

This is a generic document that is to be made available to M/E workers.

The Plan gives guidance on how subsurface works should be managed to protect human health and the environment from hazards associated with any residual hydrocarbon contamination.

This Plan is not site specific. This Plan is not intended as a standalone guide for major re-developments. The developer and contractor should engage appropriate expertise to develop a project specific Plan for major works.

The Plan is intended to assist the owner, or site controller, in meeting their legal obligations with respect to health, safety and the environment. It is not intended to relieve the owner of their legal responsibilities.

This Plan is designed to be operative when the site is managed as a service station under operational control.

### **Possible Contaminants Present**

This Plan is a generic document for use when completing subsurface works at/ or in the vicinity of service stations. This is not site specific. There may or may not be contaminants present.

Typical service stations include storage of petrol and diesel. Leaded petrol stopped being supplied in 1996. Contamination may be present in soils, groundwater or air.

### **Potential Hazards**

Should contaminants be present, site users or contractors undertaking confined space, excavation or subsurface maintenance work may be exposed to those contaminants.

The principal exposure pathways comprise inhalation of vapours, chronic dermal (skin) contact with impacted soils or groundwater and accidental ingestion of impacted soils or groundwater.

Activities involving the handling of soil and groundwater during excavation works, for example, off site soil disposal and dewatering.

Work practices should be managed to minimise exposure to contaminants.

Work practices should also be managed to prevent the release of residual hydrocarbon contamination into the environment.

## **Workers Obligations**

Any worker undertaking subsurface works is required to follow the procedures given in this Plan in addition to any other legal requirements (e.g. HSE Act, OSH codes, ERMA codes).

## **Safety Procedures**

### **Worker Safety**

As a precautionary measure, the following controls shall apply to

# GENERIC MAINTENANCE/EXCAVATION WORKER PLAN FOR AREAS WITH POTENTIAL HYDROCARBON CONTAMINATION

maintenance/excavation works  
undertaken at the Site:

## Worker Training

Before work on the site is commenced, M/E workers shall be thoroughly briefed regarding potential hazards and the contents of this Plan.

## Worker Personal Protective Equipment (PPE)

All workers directly handling contaminated materials shall wear appropriate PPE. Specific needs will need to be determined on a case-by-case basis should contaminated soil or groundwater be present but, as a minimum, the following should be used:

- Overalls or long trousers and a long-sleeved shirt
- Appropriate gloves
- Waterproof safety boots or gumboots
- Safety glasses or other appropriate eye protection
- Appropriate first aid kit including eye-wash

In addition to wearing standard personal protective equipment, the following procedures should be strictly adhered to:

- avoid skin contact with contaminated soil or water;
- do not consume food/beverages near excavations/works;
- Do not smoke within 8 m of excavations/works;
- Wash hands thoroughly before eating or smoking.

## Operating Procedures

In addition to standard procedures, follow protocols outlined in relevant OSH guidelines such as the OSH publication, "Approved Code of Practice for Safety in Excavation and Shafts for Foundations".

No personnel shall enter excavations/confined spaces unless all standard procedures have been followed and every possible step has been taken to mitigate potential hazards. In addition to normal precautions with confined spaces or excavations the following procedures should be followed.

## Safe Working in Confined Spaces

At all excavations at the relevant site there is potential for hazardous vapours to accumulate. This includes open manholes, shallow trenches and excavations. In addition to the procedures specified in the OSH document Safe Working in a Confined Space (OSH, 1997) procedures should consider vapour inhalation risk monitoring, reduction and control.

Petroleum hydrocarbon and some solvent vapours are heavier than air and may accumulate to dangerous levels in low areas such as pits, drainage sumps, cellars, and enclosed drains.

All relevant guidelines or standards (such as AS2865:1995 and the OSH publication "Safe Working in a Confined Space") should be followed and only suitably qualified persons should enter a confined space.

If petroleum odours are present, atmospheric testing must be carried out to ensure oxygen levels are 19.5% to 21%, and the concentration of flammable gases <2% of the lower

# GENERIC MAINTENANCE/EXCAVATION WORKER PLAN FOR AREAS WITH POTENTIAL HYDROCARBON CONTAMINATION

explosive limit (LEL). All possible mitigation measures must be taken.

Reference should be made to the relevant environmental reports before significant subsurface excavations.

## Strong Odours Outside Confined Spaces

If strong petroleum odours are present in areas not classified as confined spaces, the appropriate guidelines (currently AS2865:1995 “Safe Working in a Confined Space”) should still be followed and mitigation measures taken where appropriate.

## Excavation/Entry Records

Written records should be kept of the excavation/entry into confined space, including location, dimensions, and quantities of soil/water removed or relocated.

## Restricted Articles

The following articles and activities are prohibited within 8m of any excavation where hydrocarbons are present, except under special circumstances:

- Gas cutting;
- Grinders;
- Other hot works;
- Ignition sources;
- Explosives; and
- Any equipment not certified intrinsically safe.

Special circumstances can include:

Areas where a suitably qualified and competent person has assessed the risk; and

mitigation measures and either:

- confirmed the concentration of flammables is <2% of LEL, or:
- where the flammables concentration is above 2% LEL employed mitigation measures (such as forced ventilation) and continuous monitoring.

## Decontamination / First Aid

Appropriate decontamination procedures shall be followed following any work associated with contaminated soils and/or groundwater. As a minimum this should include:

- Establishment of a designated clean area on the site;
- Remove PPE, wash face and hands before eating, drinking and/or smoking;
- Dispose of or wash all PPE after use;
- Appropriate treatment, if any part of a worker’s body comes into contact with any contaminated material;
- Wash skin for several minutes after contact with contaminated water;
- If irritated flush eyes with water for several minutes (remove contact lenses if possible) and consult a doctor;
- Nausea and/or light headedness may occur as a consequence of exposure to solvents. If these symptoms occur retire to a well ventilated area and seek medical advice before any return to duties.

## Warning Signs

Warning signs must be displayed during excavation/works in the impacted area including “No smoking within 8m” and “Class 3 Flammable”.

## Environmental Management

If unexpected contamination is identified during the works the land-owner should be consulted and works should cease until clearance is given.



# **GENERIC MAINTENANCE/EXCAVATION WORKER PLAN FOR AREAS WITH POTENTIAL HYDROCARBON CONTAMINATION**

## **Contaminated Soil Removal**

All potentially contaminated soil should be disposed of in an appropriate manner to a regulator approved facility. Contaminated soil to be removed from site should be tested by suitably qualified personnel or by the receiving facility. Documentary evidence must be retained of the disposal destination and relevant approvals for all contaminated material removed from site. If soils appear contaminated, any excavated material is to be stockpiled separately based on the condition and layer it was excavated from. If excavated material is to be used as backfill, it should be replaced in the same layer/area it was excavated from.

## **Dust**

The generation of dust from earthworks should be kept to a minimum through the use of covers or watering. Measures that could be used to control dust and vapour generation are sprinkling stockpiled soil and excavations with water, covering stockpiled soil, locating stockpiles down prevailing wind from occupied areas, and/or using wind breaks to control migration of dust/vapours from the excavation area.

## **Contaminated Water and Run-off**

All work areas where there is exposed contaminated soil, or other materials which could contaminate stormwater, should be temporarily bunded or otherwise isolated while work is in progress. Any runoff from an excavation or soil stockpile should ideally be contained within the site. The generation of contaminated runoff from rainfall should be minimised where possible by covering the exposed area. Where necessary,

contaminated water should be disposed of to an oil/water interceptor system or sewer (if permitted) **never** directly to stormwater.

## **Dewatering**

If de-watering of excavations are required it will be necessary to determine the quality of groundwater to be abstracted and to ensure that any groundwater abstracted is disposed of in accordance with regulatory requirements. Dewatering from depth should be considered. Discussions should be held with the regulator prior to commencement of any dewatering to determine the appropriate method. Resource consent may be required.

## **Limitations**

The information presented above relates only to the hazards associated with working in areas where contamination is present. All work carried out still requires compliance with relevant legislation and current best practice. This would include compliance with the Health and Safety in Employment (1992), Resource Management (1991) and Hazardous Substances and New Organisms (1996) Acts and any associated regulations.

Procedures are intended to assist the site owner, site staff and contractors in managing the potential hazards at the site. This Plan is not intended to relieve parties of their legal responsibilities.

This Plan is a generic document for use by contractors working in areas where petroleum contamination may be present. It is not site specific.

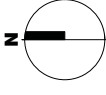
# GENERIC MAINTENANCE/EXCAVATION WORKER PLAN FOR AREAS WITH POTENTIAL HYDROCARBON CONTAMINATION

## Other Information Sources

In general, in addition to this Plan, all works undertaken shall comply with the requirements set out in the following documents:

- AS2865:1995  
<http://www.saiglobal.com/PDFTemp/Previews/OSH/As/as2000/2800/2865.pdf>
- New Zealand Health and Safety in Employment (HSE) Act 1992.
- New Zealand Health and Safety in Employment (HSE) Regulations (Duties in Relation to Excavations in Construction Work) 1995.NZ OSH Health and Safety Guidelines on the Clean up of Contaminated Sites, March 1994.
- NZ OSH Guide for Safety with Underground Services, May 1994.
- NZ OSH Approved Code of Practice for Safety in Excavation and Shafts for Foundations, September 1995.
- ICS Cards and MSDSs
- NZ OSH Guidelines for the Provisions of Facilities and General Safety in the Construction Industry, October 1995.
- NZ OSH Safe Working in a Confined Space, 1997  
<http://www.osh.dol.govt.nz/order/catalogue/pdf/confined.pdf>
- Workplace Exposure Standards, 2002, OSH and Department of Labour

QUEENSTOWN LAKES DISTRICT COUNCIL  
**APPROVED PLAN:**  
**RMI150154**  
 Tuesday 14 April 2015



**IMPORTANT NOTICE**

1. Throughout construction, no change can be made to the approved plans without the prior written consent of the Council. Any change to the approved plans without the prior written consent of the Council is a breach of the Resource Management Act 1991.
2. The contractor is responsible for obtaining all necessary permits and consents from the relevant authorities.
3. No change to any structural element, cornice, window or door, without the approval of the structural engineer.
4. The contractor is responsible for obtaining all necessary permits and consents from the relevant authorities.
5. The contractor is responsible for ensuring all appropriate safety measures are in place for the duration of the construction work.

**NOTES GENERAL**

6. Dimensions shall be obtained by cutting off these dimensions.
7. All dimensions shall be verified on site by the contractor.
8. These drawings and the information contained therein shall be used for the construction of the project. The contractor shall be responsible for ensuring that the construction is in accordance with the approved plans.
9. The contractor shall be responsible for ensuring that the construction is in accordance with the approved plans.
10. The contractor shall be responsible for ensuring that the construction is in accordance with the approved plans.
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19. The contractor shall be responsible for ensuring that the construction is in accordance with the approved plans.
20. The contractor shall be responsible for ensuring that the construction is in accordance with the approved plans.



**SITE 2**  
 Location for placement  
 of relocated material.

**SITE 1**  
 Location of proposed  
 Aviation Fueling Site.

**SITE 3**  
 Location of proposed  
 Alpinion Population  
 Fueling Site.

**Z Energy Limited**  
 9 Huggates Street Auckland  
 P.O. Box 2091  
 Auckland  
 New Zealand

NO	DESCRIPTION	DATE	BY
1	ISSUED FOR TENDERS		
2	REVISED		
3	REVISED		
4	REVISED		
5	REVISED		
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**Z Wanaka Airport**  
 Lloyd Dunn Avenue  
 Luggate

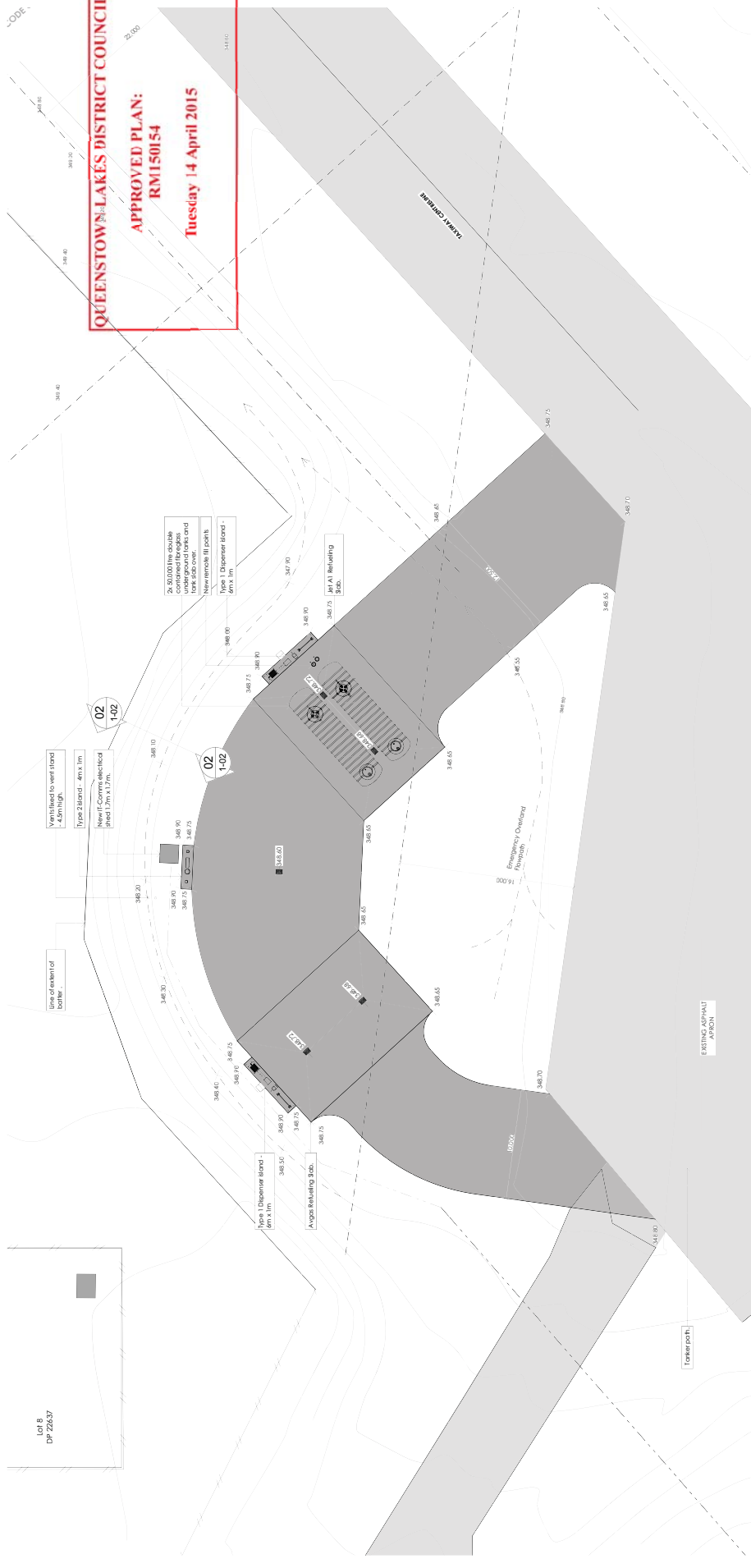
LOCALITY PLAN

**ICR studio**  
 10014 9 579 8647 • 0943 239 8248 • 10014 9 579 8647  
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 10014 9 579 8647 • 0943 239 8248 • 10014 9 579 8647

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 0-02 B

Locality Plan  
 SCALE 1:15000





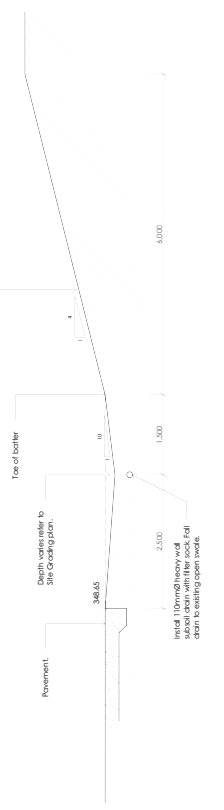
**QUEENSTOWN LAKES DISTRICT COUNCIL**  
**APPROVED PLAN:**  
**RM150154**  
**Tuesday 14 April 2015**

- IMPORTANT NOTICE**
1. Throughout construction, you change can be made to the drawings and specifications without notice. It is your responsibility to ensure that all work is done in accordance with the approved plans and specifications.
  2. The contractor is responsible for ensuring that the building is constructed in accordance with the approved plans and specifications.
  3. No change to the approved plans and specifications can be made without the written consent of the contractor.
  4. The contractor is responsible for ensuring that the building is constructed in accordance with the approved plans and specifications.
  5. The contractor is responsible for ensuring that the building is constructed in accordance with the approved plans and specifications.

- NOTES GENERAL**
6. Dimensions and notes shall be checked off these drawings.
  7. All dimensions shall be verified on site by the contractor.
  8. These drawings shall be made in conjunction with the approved specifications and shall be used as a guide only. The contractor shall be responsible for ensuring that the building is constructed in accordance with the approved plans and specifications.
  9. The contractor shall be responsible for ensuring that the building is constructed in accordance with the approved plans and specifications.
  10. The contractor shall be responsible for ensuring that the building is constructed in accordance with the approved plans and specifications.
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  20. The contractor shall be responsible for ensuring that the building is constructed in accordance with the approved plans and specifications.

**01. Set-Out & Site Grading Plan**  
SCALE 1:200

Form wide bermed, banked, welling into area drain under swale level.  
Hydrated in the softwedge area upon completion of the forming of bottom and swales.  
Form batter in maximum 1:4 gradient upon completion of set outs.



**02. Swale Section**  
SCALE 50

<b>Proposed Coverage Areas</b>	
Concrete	314.00m <sup>2</sup>
Asphalt	888.52m <sup>2</sup>

**Z Energy Limited**  
 9 Hugesones Street, Auckland  
 P.O. Box 2791  
 Auckland  
 New Zealand

NO.	DATE	DESCRIPTION	BY
1	15/04/2015	ISSUED FOR PERMIT	SP
2	15/04/2015	ISSUED FOR PERMIT	SP
3	15/04/2015	ISSUED FOR PERMIT	SP
4	15/04/2015	ISSUED FOR PERMIT	SP
5	15/04/2015	ISSUED FOR PERMIT	SP

**Z Wanaka Airport**  
 Lloyd Dunn Avenue  
 Luggate

**Set-Out & Site Grading Plan**

DATE: 15/04/2015  
 DRAWING NUMBER: 157716  
 DRAWING SCALE: 1:200  
 PROJECT: 150154

ICR studio  
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