

## ORC STAFF RECOMMENDING REPORT

ID Ref: A146119  
File No: RM14.026  
Application No's: RM14.026.01-03  
Prepared For: Hearings Panel  
Prepared By: Mathew Bell, Senior Consents Officer  
Date: 1 December 2014

**Subject: Applications RM14.026.01-03 by Lakes Marina Projects Limited for activities associated with the construction of a 195 berth marina, Frankton, Queenstown.**

### 1. Purpose

- 1.1 To report and make recommendations on the determination of the above application under the notified provisions (Section 95 and Section 95F) of the Resource Management Act 1991 (the Act).

### 2. Background Information

- 2.1 Lakes Marina Projects Limited (the applicant) has applied to the Otago Regional Council (the Council) for resource consents associated with the construction of a marina at the Queenstown Lakes District Council (QLDC) Frankton Marina Local Purpose Reserve in Lake Wakatipu/Whakatipu-wai-maori (Lake Wakatipu). The site is located approximately 130 metres (m) south west of the intersection of Sugar Lane and Frankton Road (State Highway 6A), Frankton, Queenstown. The applicant has sought a consent term of 15 years, and proposes to construct the marina in two stages. An artist impression of the proposed marina is below in Figure 1.



Figure 1: Applicant's artist impression of proposed marina

## Site History

- 2.2 The site was gazetted as the Frankton Marina Recreation Reserve in 1989. The QLDC granted consent in 1993 (RC 93/402) to reclaim the existing marina and construct a 100 berth marina. This partially constructed marina did not withstand the wave action and broke apart due to structural problems, before being dismantled in 2004. In 2003, Resource Consent RM030918 issued by the QLDC authorised the construction of a smaller marina at the site. In 2005 Resource Consent RM051121 gave approval for the QLDC to upgrade/replace the existing boat ramps at the marina site.
- 2.3 In 2009, a joint hearing was held for applications before the QLDC and the Council, which resulted in QLDC Land Use Consent RM070542 and Council Resource Consents 2007.365-368, and 2007.372-382 being issued on 12 September 2009, after an Environment Court Decision dated 3 September 2009.
- 2.4 Resource Consents 2007.365-368 and 2007.372-382 were issued to Queenstown Marina Developments Limited, and were granted a term of 35 years (for the long term activities) and 15 years (construction activities). The consents authorised Queenstown Marina Developments Limited to construct a marina with 240 berths, a jetty and breakwater. The berths, jetty and breakwater were proposed to be fixed to the lake bed using 290 screw anchors. The authorised marina was proposed to measure approximately 120 metres (m) from lake to shore and approximately 120 m wide. The consents also authorised the reshaping of the foreshore of Lake Wakatipu and placing lake walls, steps and creating a beach area.
- 2.5 The consents also authorised the reclamation of the existing inlet and to construct a building complex, which will house marina associated businesses, including a restaurant, Harbourmaster's office, search and rescue base and chandlery.
- 2.6 An existing unnamed tributary (Marina Creek) of Lake Wakatipu enters the site through a culvert. These consents authorised the replacement of the culvert and diversion of Marina Creek to Lake Wakatipu, as opposed to its current flow path, which currently discharges to the inlet. The consents also authorised the placement of two footbridges over the bed of Marina Creek, once it has been diverted and the discharge of storm water and water from the washing down of boats and associated equipment from the site to Lake Wakatipu.
- 2.7 As the Council has not received any correspondence from the current consent holder in terms of notification prior to works being undertaken as required by current consent conditions, the consents lapsed 5 years after the date of issue (being 9 September 2014), in accordance with Section 125 of the Act.
- 2.8 It has also come to Council's attention that Queenstown Marina Developments Limited is now in liquidation and the company may be struck off the Companies Office Register.

## Description of the Proposed Activities

- 2.9 The applicant proposes to construct a marina in the Frankton Arm of Lake Wakatipu. The fully completed marina will consist of 195 berths, a jetty and



breakwater. Figure 2 below outlines the proposed marina layout, with stage 1 structures coloured grey, and stage 2 represented by white dashed lines.

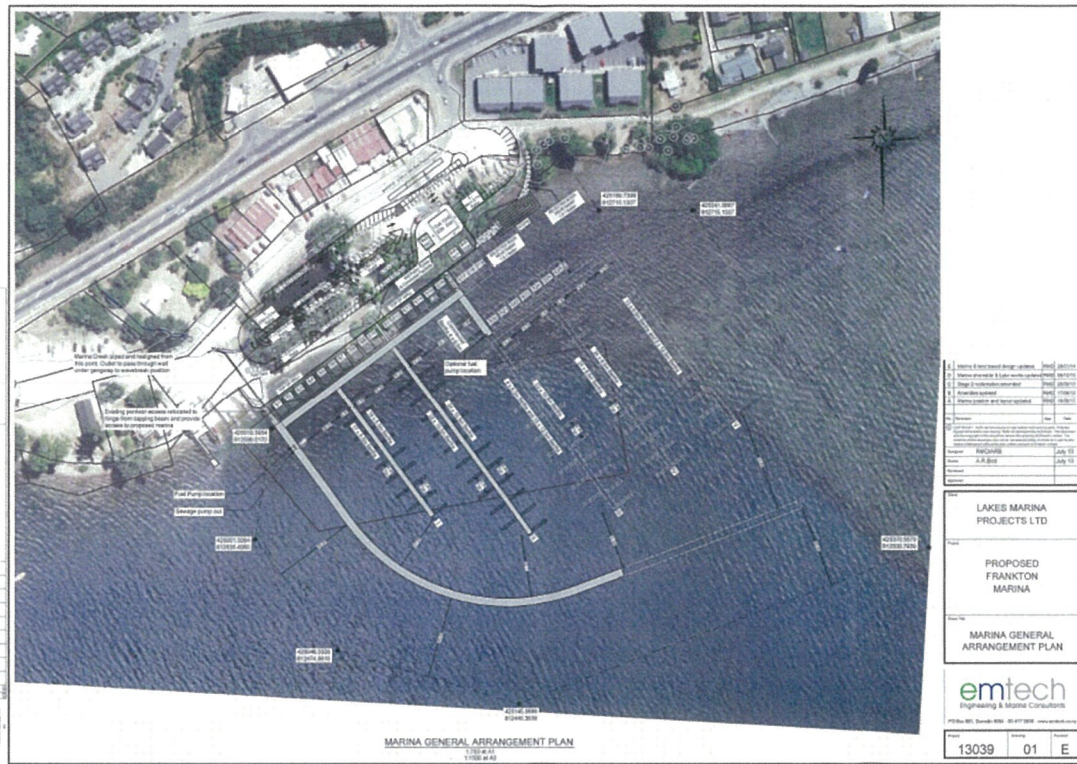


Figure 2: Applicant's proposed marina layout

- 2.10 The marina will be constructed in two stages over 10 years. Stage 1 is proposed to be completed within five years, and includes the construction of a wave attenuator, extending 170 m into the lake, 85 berths, a 150 m retaining wall and associated features along the shore line of the lake, a car park, and buildings.
- 2.11 Stage 2 will see the wave attenuator extended to its full length (320 m), and the additional 110 berths on the eastern side of the development completed. The application notes, that depending on funding, the wave attenuator may be fully completed in stage 1.
- 2.12 The application references several reports which were prepared for the previous consent applications at the site in 2007. The application notes that these reports are available on the QLDC's website.
- 2.13 Works are proposed to be undertaken between the hours of 6 am to 7 pm, Monday to Saturday.

**Marina Structures**

- 2.14 Upon completion, the marina will occupy an area of approximately 4.8 hectares (240 m x 200 m), enclosed by the wave attenuator, on the west and south sides. The applicant wishes to have flexibility in terms of the layout of the berths, but it is envisioned that it will comprise 5 finger piers, ranging from 87 m to 140 m in length, with finger berths being 8.5 m to 12.5 m in length on each pier.

- 2.15 The wave attenuator will consist of large precast concrete pontoons, connected together with flexible connectors. The dimensions of each 6 m length section of pontoon will be 4.3 m wide, a depth of 2 m with 0.5 m floating above the lake surface.
- 2.16 The piers, berths and wave attenuator will float on pontoons fixed to the lake bed using screw anchors embedded up to 7 m into the lakebed. Screw anchors will be fixed using a rig mounted on a barge. From the screw anchors tensioned cables will keep the structures in place.
- 2.17 Up to 26 floating buildings on pontoons, connected to piles, between 36 m<sup>2</sup> and 108 m<sup>2</sup> in area will be placed on the surface of the lake, along the front of an esplanade wall, with mooring piles driven into the lake bed, to hold them in place.
- 2.18 The marina will be fully serviced with water, electric power, sewage pump-out and fuel dispensing facilities. A boat washing facility will be included, with all wash water being collected and piped to the reticulated sewer.

### ***Retaining Wall***

- 2.19 The 150 m retaining wall will be constructed by initially creating a trench along the length of the lake shoreline using small hydraulic machinery with a back hoe. The trench will be back filled and compacted to provide a foundation. Steel piles will be driven into the ground and precast concrete panels will be placed between the piles to form the wall. The top of the wall will be above the lake level at which flooding first occurs in Queenstown. The wall will also incorporate concrete steps down to the lake surface in the northern part of the lake edge, surrounded by a deposited rock revetment. Behind the wall an esplanade, car park and areas for various buildings will be created. The esplanade will be incorporated into the Queenstown Trail, which runs along the lake.

### ***Lakebed Works***

- 2.20 Approximately 3,000 cubic metres (m<sup>3</sup>) of material will be removed from the lake bed during stage 1, and 2,000 m<sup>3</sup> during stage 2, using small hydraulic machinery, to provide sufficient depth for the berths and floating pontoon buildings.
- 2.21 The applicant intends to reclaim the existing manmade inlet to construct the car park and esplanade. Suitable excavated material from the lake bed will be used to infill the inlet to design level. Any fine silt removed that is identified as unsuitable for fill material will be disposed of offsite.
- 2.22 An existing jetty and a row of existing timber piles immediately to the west of the proposed development will be moved further to the south west, to make way for the wave attenuator structure.

### ***Marina Creek Works***

- 2.23 Currently Marina Creek enters the site through an existing culvert under the State Highway 8A and discharges to the lake via the manmade inlet. The applicant proposes to divert the watercourse into a 50 - 55 m long box culvert, which will



discharge directly to the lake, adjacent to where the wave attenuator joins the retaining wall. The culvert will have the capacity to carry a 1 in 20 year flood event, and will have a diameter of 750 mm.

### **Public Access**

- 2.24 Access to the wave attenuator and the main stem jetty along the front of the marina will be open to the public, at all times except during storm conditions. The applicant will restrict access to the finger piers to only berth holders. However, no access to these structures will be allowed during the night or during storm conditions.

### **Site Description**

- 2.25 The marina site is situated towards the northern end of the Frankton Arm of Lake Wakatipu. Works are proposed to be undertaken on land legally described as Crown Land Lake Bed, Secs 48, 52 and 53 Blk XXI Shotover SD, Pt Sec 39 Blk XXI Shotover SD, Sec 1 SO 21582, Sec 1 SO 24208. The midpoint map reference of the proposed works is NZTM 2000 E1262504 N5006069.
- 2.26 The existing inlet at the site was excavated in the 1970's and at present is used for mooring up to 18 boats. The inlet's maximum depth varies between 0.5 m and 2.0 m.
- 2.27 Current structures in or on the lake in the surrounding area include a jetty to the southwest west of the site, and a timber pile breakwater, and two boat ramps. To the north east of the lake are 6 smaller jetties. On land adjacent to the site is Sugar Lane, a car parking area and a several commercial buildings. Willow Trees run along the lake shore. Beyond the site is State Highway 6A/Frankton Road. There are several QLDC storm water discharges in the proposed marina area that discharge storm water collected from the surrounding area.
- 2.28 Lake Wakatipu is the third largest lake in New Zealand and has depths exceeding 300 m. The Frankton Arm is 6 km in length and diverges from the main body of the lake at Queenstown.

### **Schedule 1 of the Regional Plan Water for Otago**

- 2.29 Lake Wakatipu is identified in Schedule 1 of the Regional Plan: Water for Otago (RPW) as having the following natural values:
- *A large water body supporting high numbers of particular species, or habitat variety, which can provide for diverse life cycle requirements of a particular species, or a range of species.*
  - *Macrophyte bed composition of importance for resident biota.*
  - *Freedom from biological nuisances aquatic pest plants (e.g. Lagarosiphon) identified in the Pest Management Strategy for Otago 2001*
  - *Significant indigenous vegetation including a rare association of aquatic plants and a presence of riparian vegetation of significance to aquatic habitats*
  - *Significant habitat for koaro, eel, trout, salmon*
  - *Significant habitat for juvenile fish*
  - *Presence of indigenous invertebrates threatened with extinction.*
  - *Presence of indigenous fish species threatened with extinction.*



2.30 Lake Wakatipu is also listed as having the following outstanding natural features, landscapes or scenic values within the wider landscape context of the surrounding mountains:

- *as a fishery;*
- *for its scenic characteristics;*
- *for scientific value, in particular water clarity, and bryophyte community;*
- *for recreational purposes, in particular boating;*
- *for historical purposes;*
- *for significance in accordance with tikanga Maori, in particular sites at the head of the lake, and the legend of the lake itself.*

2.31 Lake Wakatipu scenic values include:

- *clear blue colour of the water,*
- *river deltas and beaches and particularly uncommon beach features between Rat Point and White Point.*

2.32 Schedule 1B of the RPW identifies lakes and rivers where the water taken is used for public water supply purposes and Schedule 1C identifies registered historic places. There are two water supplies from Lake Wakatipu identified in Schedule 1B, with the nearest one being located across the Frankton Arm from where the proposed work is to take place. There are no 1C values in close proximity to the proposed activities.

2.33 Schedule 1D identifies the spiritual and cultural beliefs, values and uses associated with water bodies of significance to Kai Tahu. Lake Wakatipu is identified as having the following values:

- ***Kaitiakitanga:*** *the exercise of guardianship by Kai Tahu, including the ethic of stewardship.*
- ***Mauri:*** *life force.*
- ***Waahi tapu and/or Waiwhakaheke:*** *sacred places; sites, areas and values of spiritual values of importance to Kai Tahu.*
- ***Waahi taoka:*** *treasured resource; values, sites and resources that are valued.*
- ***Mahika kai:*** *places where food is procured or produced.*
- ***Kohanga:*** *important nursery/spawning areas for native fisheries and/or breeding grounds for birds.*
- ***Trails:*** *sites and water bodies which formed part of traditional routes, including tauraka waka (landing place for canoes);*
- ***Cultural materials:*** *water bodies that are sources of traditional weaving materials (such as raupo and paru) and rongoa (medicines).*

***Schedule 2 of the Water Conservation (Kawarau) order***

2.34 Lake Wakatipu is listed in Schedule 2 of the Water Conservation (Kawarau), as a water body to be protected. The order declares that the waters set out in Schedule 2 which are no longer in their natural state contain one or more amenity and intrinsic values which warrant protection because they are considered outstanding. Table 1 below outlines the values for Lake Wakatipu identified in the order.

**Table 1: Values Listed for Lake Wakatipu in Water Conservation (Kawarau) Order**

<b>Waters</b>	<b>Outstanding Characteristics</b>	<b>Restrictions and Prohibitions</b>
Lake Wakatipu (from outlet at control gates (F41:738-667) to confluences)	(b) fishery; (c) scenic characteristics; (d) scientific value, in	(i) fish passage to be maintained; (ii) water quality to be





Waters	Outstanding Characteristics	Restrictions and Prohibitions
of Dart River (at or about E41:438-853) and Rees River (at or about E41:448-852) and including whole lake).	(e) particular water clarity, and bryophyte community; recreational purposes, in particular boating; (g) significance in accordance with tikanga Maori, in particular sites at the head of the lake, and the legend of the lake itself.	managed to Class AE, Class CR, Class F and Class FS standards.

**Key:**

Outstanding characteristics (Section 199(2)(b) and (c) of the Act):

- (a) as habitat for terrestrial or aquatic organisms;
- (b) as a fishery;
- (c) for its wild, scenic or other natural characteristics;
- (d) for scientific and ecological values
- (e) for recreational purposes;
- (f) for historical purposes;
- (g) for significance in accordance with tikanga Maori.

Restrictions and Prohibitions:

References to Classes are Water Quality Classes as in the Third Schedule of the Act.

***Ecological Assessment:***

- 2.35 A Lake Ecological Assessment, by Ryder Consulting dated May 2007 which has been included in the application, sought to summarise the freshwater ecological values in the area of the lake where works are proposed. The aquatic survey was undertaken at the proposed marina site on 29 and 30 November 2006, and is summarised below.
- 2.36 Water quality, macroinvertebrates and fish were surveyed, in six transects from the shore out to a distance of approximately 20 m into the lake. General observations were also made relating to periphyton (benthic algae), aquatic vegetation (macrophytes) and bed character.

Water Quality:

- 2.37 The water quality at the proposed marina location was well within the guidelines and typical of a clean, high country oligotrophic (low nutrient status) lake. The water quality is not expected to vary widely throughout the year, apart from a moderate increase in temperature along the shallow shoreline areas during the summer months.

Macrophytes:

- 2.38 The dominant primary producers in oligotrophic lakes, such as Lake Wakatipu, are a variety of aquatic macrophytes. These include small amphibious species in shallow or exposed areas through to large stands of macrophytes in deeper waters. The primary producers in the littoral areas of the lakes provide food and habitat for the variety of invertebrate and fish species and form the basis of the food chain.
- 2.39 The applicant sampled macrophytes at 30 locations at the site of the proposed marina. The survey revealed that charophytes dominated the area with some relatively dense patches of elodea, isoetes and potamogeton also present. No

bryophytes were found, which was expected as bryophytes are typically found in deeper waters than those sampled.

Benthic Macroinvertebrates:

- 2.40 Macro invertebrates are important in lakes as they are an important food source for many New Zealand fresh water species and a number of wetland and lake bird species. Macro invertebrates feed on macrophytes and, therefore, play a fundamental role in the transfer of primary producers into a food source for fish and other larger species.
- 2.41 Benthic macro invertebrate were sampled from the bed of the lake to a depth of approximately 100 millimetres (mm) below the lake surface. After the samples were analysed, the applicant found that the taxonomic richness in all samples from the site was very low (five macro invertebrate taxa). However, this is expected in a lake environment due to the dynamic habitat and the effects of wave and lake level fluctuations.
- 2.42 The taxa observed were typical of a soft sediment lake bed and included chironomid larvae, snails, oligochaete worms and Pycnocentodes caddis flies. These taxa are commonly found in lakes throughout the South Island.

Fish:

- 2.43 The New Zealand freshwater fish fauna is regarded as having low diversity and this is typical in oligotrophic lakes such as Lake Wakatipu. A previous recommending report identified three freshwater fish species in the Frankton area of Lake Wakatipu. Two of the species identified are native (*Anguilla dieffenbachia* or long fin eel and *Galaxias brevipinnis* or koaro) and one is introduced (*Salmo trutta* or brown trout). The fisheries survey, undertaken by the applicant, utilised passive netting techniques. These netting techniques are suitable for slow flowing and deep waters, such as lakes, where the use of electric fishing is restricted.
- 2.44 Long fin eel, common bullies and unidentified galaxiid larvae were caught in the nets set by Ryder Consulting in 2007. Two adult longfin eels were caught, as well as nine common bullies. The galaxiid larvae present is likely to be koaro due to the previous records for species in this area.

***Lake Bed Surface and Wave Generation:***

- 2.45 The lake bed sediment consists of very soft, weakly cohesive silt. Other than closer to shore, where sand and gravel is found on the surface, the lake bed is undisturbed and unconsolidated by wave action. The locally generated wind waves in the Frankton Arm are of short period and have short wave length and, therefore, do not disturb the bottom as evidenced by the lingering depressions left in the lake bed by the removal of the piles used for the previous marina. The lakebed sediment is described as close to fluid. Investigation undertaken previously and cited by the applicant shows that the lakebed silts, in its in situ state, has very low shear strength.
- 2.46 The Frankton Arm of Lake Wakatipu experiences lesser “fetch” (the length of water over which a given wind has blown) from prevailing winds than the rest of the lake and, therefore, experiences calmer conditions. The proposed marina site



on the northern side of Frankton Arm is exposed to waves generated on fetches to the south west and south east.

### ***Marina Creek***

- 5.1 Marina Creek is one of several streams draining the southern side of Queenstown Hill. The creek acts as a conduit to the lake for storm water flows from some properties in the Marina Heights sub-division, in addition to rural land above Marina Heights. The unnamed tributary has been estimated to have an upstream catchment of 114.1 hectares (ha).
- 2.47 The creek passes through four, 400 mm diameter culverts which run under State Highway 6A, and then a 12 m length, 600 mm diameter culvert under Sugar Lane. Prior to discharge to the manmade inlet of Lake Wakatipu, the bed of the creek outside the Sugar Lane culvert is approximately 700 mm to 900 mm wide, with bed material consisting of fine to coarse gravel, and densely matted crack willow roots. The riparian vegetation of the creek consists mainly of introduced species. An in-stream survey of the section to be diverted into a pipe, by the applicant found no fish, and five species of common macro invertebrates.

### ***Current Consents and Activities***

- 2.48 There are no current consents that have been issued by the Council in the general vicinity of the proposed works.
- 2.49 Currently the site is used for marina purposes and includes boat handling, slippage areas and parking. Drainage from the site is by surface runoff directly to Lake Wakatipu. There are several existing piped storm water drains that cross the site. These drains collect storm water from road sumps in the existing Sugar Lane formation and other surface drains in the vicinity. The pipes currently discharge either to the manmade inlet or directly to Lake Wakatipu. Those pipes made obsolete by the new development will be removed and the pipes still required, will be re-laid as needed and connected to the new storm water systems to be installed as part of the development.

## **3. Status of the Applications**

### **Jurisdiction under the Otago Regional Council and Queenstown Lakes District Council**

- 3.1 In 1994 the Council delegated the authority to determine applications made under Section 13(1)(a) of the Act to the QLDC. Under the agreement between the Council and the QLDC, the Council in its discretion may resume the authority to determine any such applications. In this case, as a water permit to divert and a discharge permit is also required for the proposed activities, the Council decided to process the land use consent also.
- 3.2 The following outlines the jurisdiction of each Council, as it relates to the proposed activities before each Council.
- 3.3 QLDC Jurisdiction under the Building Act 2004:
- The structural integrity of any structure, including the marina, and wave attenuator, and associated structures; and
  - Constructing the retaining wall, car park, walkways on land and associated buildings on land;

- 3.4 QLDC Jurisdiction under the Resource Management Act 1991:
- Activities on land and the surface of the water, including the ongoing operation of the marina, boat berthing, maintenance and refuelling (NB: any unauthorised discharges will be subjected to the Otago Regional Council's compliance unit)
- 3.5 The Council's Jurisdiction under the Resource Management Act 1991:
- The disturbance of the bed of Lake Wakatipu and Marina Creek;
  - The placing of structures in, on or over the bed of Lake Wakatipu and Marina Creek;
  - The diversion of water of Marina Creek into a pipe;
  - The reclamation of the lake bed, deposition of material in the lake bed; and
  - The discharge of contaminants to water during the construction process.
- 3.6 This report will assess the placement of the structures to ensure that they will not result in erosion, property damage, flooding, scouring or land instability. In addition the effect of the activities on water quality will also be considered. However, whether or not the structures will perform their intended function, or issues relating to the structure's lifespan or safety issues are outside the scope of this report.

#### **Activities that require Resource Consent**

##### Land Use Consent Application RM14.026.01:

- 3.7 To disturb, reclaim, remove and place structures and deposit material on, over or under the bed of Lake Wakatipu and Marina Creek, for the purpose of constructing a marina are *restricted discretionary activities* in accordance with Rules 13.2.2.1 and 13.4.2.1, and *discretionary activities* in accordance with Rules 13.2.3.1 and 13.5.3.1 of the RPW.

##### Water Permit Application RM14.026.02:

- 3.8 To permanently divert the flow of Marina Creek into a pipe for the purpose of constructing a marina is a *discretionary activity* under Rule 12.3.4.1 of the RPW, as requirements, of Permitted Rule 12.3.2.1 cannot be met.

##### Discharge Permit Application RM14.026.03:

- 3.9 As the application was lodged on 4 February 2014, prior to Plan Change 6A of the RPW becoming operative on 1 May 2014, the discharge of sediment to water for the purpose of constructing a marina was classed as a *discretionary activity* under Rule 12.13.1.1 of the RPW. Since Plan Change 6A became operative, the remobilisation (discharge) and redeposition of bed material (deposit) due to in-stream works is addressed under Chapter 13 rules of the RPW. In light of this, conditions addressing these effects are now placed on land use consents, without a requirement for a discharge permit.

- 3.10 However, as the applicant will be undertaking earthwork activities that may result in sediment discharges from disturbed land to Lake Wakatipu and Marina Creek for longer than 2 years; this is a *discretionary activity* under Rule 12.C.3.2. As such a discharge permit is required. As the applications were received prior to Plan Change 6A becoming operative, the discharges of



sediment during in-stream works and works outside the lake and river bed will be subject to conditions on the permit, should it be granted?

- 3.11 Overall the proposed activity is classed as discretionary. The Hearings Panel may grant or decline these applications, and if granted, may impose conditions under Section 108 of the Act.

### **Permitted Activities**

The applicant has confirmed it is able to meet the requirements of the following permitted rules below, and therefore will not require resource consent for these activities:

#### Use of the Marina and associated structures:

- 3.12 The use of the marina and associated structures once completed over the bed of Lake Wakatipu is permitted, providing the following requirements in Rule 13.1.1.1 are met.

- 13.1.1.1 The use of any structure that is fixed in, on, under, or over the bed of any lake or river is a *permitted* activity, providing:
- (a) The structure is lawfully established; and
  - (b) In the case of a change in use, the effects of the new use of the structure are the same or similar in character, intensity and scale as the preceding use; and
  - (c) The structure is maintained in good repair.

#### The repair of the marina and associated structures:

- 3.13 The repair of the marina and associated structures (if required) is a permitted activity providing the following requirements in Rule 13.3.1.1 can be met.

- 13.3.1.1 The repair or maintenance of any lawful structure in, on, under or over the bed of a lake or river, or any Regionally Significant Wetland, is a *permitted* activity providing:
- (a) There is no permanent change to the scale, nature or functions of the structure.

#### The alteration of the marina and associated structures:

- 3.14 The alteration of the structure (to allow for the shifting of finger berths etc. within the marina foot print), is a permitted activity providing the following requirements in Rule 13.3.1.2 can be met.

- 13.3.1.2 The extension, alteration, replacement or reconstruction of any lawful structure in, on, under or over the bed of a lake or river, or any Regionally Significant Wetland, is a *permitted* activity providing:
- (a) In the case of a replacement or reconstruction, the structure is replaced or reconstructed in the same location as the original structure; and
  - (b) There is no permanent change to the scale, nature or functions of the structure, except where a rule under 13.2.1 applies to that structure and the conditions of that rule are met.



Placing structures other than defenses against water

3.15 The erection or placement of any structure other than a defence against water within 7 metres of the margin (i.e. the landward side) of any lake is a permitted activity providing the following requirements in Rule 14.4.1.1 are met.

- 14.4.1.1 The erection or placement of any structure, other than a defence against water, within 7 metres of the margin of any lake, or within 7 metres of the top of the bank of any river, is a **permitted** activity, providing:
- (a) It does not result in the physical prevention or obstruction of access for works to avoid or mitigate any natural hazard; and
  - (b) The Otago Regional Council is notified in writing, of the location and nature of the structure, at least seven working days prior to commencing the erection or placement.

Discharge of storm water:

3.16 Though the application states that all wastewater, storm water will be disposed of to the QLDC existing reticulation (Application page 35 of 78 Vivian+espie), the second paragraph notes that storm water disposal be subject to conditions currently consented on lapsed Discharge Permit 2007.367.

3.17 The discharge of storm water is a permitted activity providing the following requirements in Rule 12.B.1.8 (previously Rule 12.4.1.1) are met below. This includes storm water from the car park esplanade and buildings. A discharge of storm water to the lake from the jetty's and wave attenuator is considered *de minimus*. It is noted that there will be no discharge of boat wash down water, as this will be discharged to the QLDC main sewer (Paragraph 1.3 Appendix 2 page 1 Emtech), with separated solids

- 12.B.1.8 The discharge of stormwater from a reticulated stormwater system to water, or onto or into land in circumstances where it may enter water, is a **permitted** activity, providing:
- (a) Where the system is lawfully installed, or extended, after 28 February 1998:
    - (i) The discharge is not to any Regionally Significant Wetland; and
    - (ii) Provision is made for the interception and removal of any contaminant which would give rise to the effects identified in Condition (d) of this rule; and
  - (b) The discharge does not contain any human sewage; and
  - (c) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and
  - (d) The stormwater discharged, after reasonable mixing, does not give rise to all or any of the following effects in the receiving water:

- (i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
- (ii) Any conspicuous change in the colour or visual clarity; or
- (iii) Any emission of objectionable odour; or
- (iv) The rendering of fresh water unsuitable for consumption by farm animals; or
- (v) Any significant adverse effects on aquatic life.

Discharge of water from piped Marina Creek:

3.18 Once the water from Marina Creek is piped, the discharge of that piped water to water in the lake is permitted providing the following requirements of Rule 12.C.1.1 (previously addressed by Rule 12.11.2.3) of the RPW are met:

- 12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in a contaminant entering water, is a *permitted* activity, providing:
- (a) The discharge does not result in flooding, erosion, land instability or property damage; and
  - (b) There is no discharge of water from one catchment to water in another catchment; and
  - (c) The discharge does not change the water level range or hydrological function of any Regionally Significant Wetland; and
  - (d) When the discharge, including any discharge from a drain or water race, enters water in any lake, river, wetland or the coastal marine area; the discharge:
    - (i) Does not result in:
      - (1) A conspicuous change in colour or visual clarity; or
      - (2) A noticeable increase in local sedimentation, in the receiving water (*refer to Figure 5*); and
    - (ii) Does not have floatable or suspended organic materials; and
    - (iii) Does not have an odour, oil or grease film, scum or foam; and
  - (e) When the discharge enters water in any drain<sup>1</sup> that goes to a lake, river, wetland, or the coastal marine area, the discharge:
    - (i) Does not result in:
      - (1) A conspicuous change in colour or visual clarity; or
      - (2) A noticeable increase in local sedimentation, in the lake, river, wetland or the coastal marine area (*refer to Figure 6*); and
    - (ii) Does not result in the production of conspicuous floatable or suspended organic materials in the drain at the first of:

<sup>1</sup> In Rules 12.C.1.1 and 12.C.1.1A, 'drain' includes any system of drains that goes to a lake, river, wetland or the coastal marine area.



- (1) The downstream boundary of the landholding where the discharge occurs; or
    - (2) Immediately before the drain enters a river, lake, wetland or the coastal marine area; and
  - (iii) Does not have an odour, oil or grease film, scum or foam; and
- (f) When the discharge enters water in any water race<sup>2</sup> that goes to a lake, river, wetland, or the coastal marine area, the discharge:
  - (i) Does not result in:
    - (1) A conspicuous change in colour or visual clarity; or
    - (2) A noticeable increase in local sedimentation, in the water race (*refer to Figure 7*); and
  - (ii) Does not result in the production of conspicuous floatable or suspended organic materials in the race at the first of:
    - (1) The downstream boundary of the landholding where the discharge occurs; or
    - (2) Immediately before the race enters a river, lake, wetland or the coastal marine area; and
  - (iii) Does not have an odour, oil or grease film, scum or foam; and
- (g) From 1 April 2020, the discharge also complies with 12.C.1.1A.

### Other Authorisations

3.19 As the works are proposed to occur in a Statutory Acknowledgement Area, pursuant to the Ngai Tahu Claims Settlement Act 1998, Te Runanga o Ngai Tahu (TRONT) was advised of the applications. TRONT did not comment within 10 working days, therefore the applications proceeded.

3.20 The Maritime Safety Authority (MSA) was sent a copy of the applications because the proposed activities fell within the criteria outlined in Section 395 of the Act. The MSA did not comment within 15 working days, therefore the applications proceeded.

## 4. Notification and Submissions

4.1 The applicant requested that the application was publically notified. Public notification of the application, along with the land use consent application before the QLDC occurred on Wednesday 19<sup>th</sup> February 2014. The submission period for the application closed on Wednesday 19<sup>th</sup> March 2014. A total of 36 submissions were received. Thirty two submissions were in support of the applications, with 4 submissions in opposition to the application. Of the total 36 submissions, 36 wished to be heard at the hearing.

4.2 The submitters in support are:

- B W Walker;

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<sup>2</sup> In Rules 12.C.1.1 and 12.C.1.1A, 'water race' includes any system of water races that goes to a lake, river, wetland or the coastal marine area.



- Wakatipu Community Maritime Preservation Society Inc;
- Gray Superannuation Fund Pty Limited;
- D Claasen;
- L Susanto;
- S Craig;
- G Wensley;
- O Wensley;
- 875 Frankton Road Limited;
- Marina Baches Management Limited;
- K Prihadi;
- C Fagg;
- A Claasen;
- R Das;
- C H Lee;
- P H Wong;
- Austpac (Queenstown) Management Limited;
- D S C Yuen;
- Y Hong;
- H Yang;
- K C Wong & T W Ong;
- J M Friedman;
- P S Moorthy & V S Moorthy;
- K Y Hong & G P Tan;
- Y Y Room & L S Amanda;
- R Brockway & B Brockway;
- G C Koh;
- L L Ooi & H Kotahgoda;
- F F Seow;
- L S Ho;
- D Warrington; and
- S K Tan & L P Chen.

4.3 Many of the supporting submitters requested clarification on aspects of the application to be assessed by the QLDC. Many of the submitters also want construction activities to only occur from 9 am to 5 pm weekdays and 9 am to 2 pm on Saturdays. A supporting submitter also raised concerns with the piping of Marina Creek, and wished for the applicant to consider an open channel.

4.4 The four opposing submitters are:

- Commissioner of Crown Lands, Land Information New Zealand;
- I Tulloch and A M Tulloch;
- The Department of Conservation; and
- Kai Tahu ki Otago Limited;

4.5 The Commissioner of Crown Lands, Land Information New Zealand raised concerns of effects from aquatic weeds. The Department of Conservation (DoC) also raised concerns from effects of aquatic weeds, citing the lack of biosecurity measures could result in the introduction of invasive weeds. DoC also noted that it is uncertain in the application how public access will be maintained.



- 4.6 Kai Tahu ki Otago Limited raised concerns over the effects on cultural and spiritual values, contamination to the lake, and effects from aquatic weeds.
- 4.7 I Tulloch and A M Tulloch raised concerns over matters to be addressed mainly by the QLDC, but did note that construction work on Saturdays should not be allowed.
- 4.8 A total of 81 submissions were received on the application lodged with the QLDC, 68 of these submissions either supported, were neutral or sought changes in the application, and 13 were in opposition.
- 4.9 The hearing is scheduled to be held in Queenstown on Wednesday 10<sup>th</sup> - Friday 12<sup>th</sup> of December 2014.

## **5. Assessment of Environmental Effects**

### **Effects of Lake Shore Erosion, Flooding, Scouring, Land Instability and Property Damage**

#### Lake Shore Erosion and Scour

- 5.1 The applicant has noted that there is no evidence of any active littoral transport process on the shore at the proposed marina site, and the influence of the marina in this respect will be negligible. Previous studies at the site have not identified any existing instability, erosion or scour issues. The applicant has also reviewed aerial images of the site, and noted that these do not indicate any significant erosion or changes in the lake shore alignment, which suggests a relatively benign environment in terms of potential for lake shore erosion. The existing structures at the site also do not appear to have resulted in adverse effects on the shoreline.
- 5.2 Wave action will be attenuated, which will also reduce the erosion potential on the lake shore. The marina structure will also be constructed with scour protection to protect the development.
- 5.3 Though it is expected that the proposed works will not alter lake shore processes, the applicant proposes to undertake a monitoring regime to ensure lake shore erosion and scour do not occur. This will include visual inspections at pre-determined intervals, and also following periods of high lake levels and seismic events. These inspections will include survey monitoring, and extend a reasonable distance either side of the marina, and also include compiling a photographic record of each inspection to allow comparison.
- 5.4 A monitoring regime would allow any issues to be identified in its early stages and if required, a suitable remedy to be determined. The Council's Engineering, Hazards and Science Unit (EHSU) has reviewed the proposed monitoring regime and concluded it is adequate to effectively monitor lake shore erosion due to the proposed activity.
- 5.5 Consequently, a condition is recommended that lake shore erosion and scour is monitored for the duration of the consents.
- 5.6 In light of the above the effects on lake shore erosion and scour and land instability are expected to be less than minor.

### Flooding and Property Damage

- 5.7 It is important to ensure that the proposed activity will not increase the flood risk of the surrounding area. As the development is to occupy a small area of the lake shore in comparison to the size of Lake Wakatipu, this is unlikely to occur.
- 5.8 Water levels in Lake Wakatipu vary from an extreme low of 309.28 m above mean sea level (asl) to the highest recorded level of 312.80 m asl (November 1999 flood). The Council's high lake level is at 310.80 m asl, and the lake is in flood at 311.30 m asl (possible flooding in Queenstown). The applicant notes that accepted high lake levels for engineering purposes is 310.65 m asl.
- 5.9 The applicant has noted it is impracticable to provide "dry feet" in all flood conditions, however the esplanade wall will be at a height of 311.50 m asl, providing 20 cm of free board when the lake is in flood, which occurs 0.41 % of the time. The applicant notes that though some of the area at the site will be flooded at these levels, it will be designed to withstand any moderate wave action.
- 5.10 The applicant states that the development will not result in site ground levels being significantly reduced, and levels directly adjacent to buildings already present at the site will remain unchanged. As such an increase in the site flooding risk is therefore unlikely.
- 5.11 The EHSU has advised if the proposed works are undertaken in accordance with similar conditions of consent granted for the previous marina development at the site, then they have no concerns with the proposed activities. For the previous application at the site, the EHSU requested that a flood hazard map be provided to the Council once the works are completed and this is a recommended condition of consent. The flood hazard map should show the areas of inundation of the site when the lake levels are at RL 312 m and RL 313 m.
- 5.12 Recommended conditions of consent will ensure that works are undertaken as outlined in the application and do not cause any flooding, or property damage. Should such effects occur the applicant shall remedy any such damage.

### **Effects of Disturbance, Deposition, Reclamation, and Moving and Placing Structures on Lake Wakatipu and Discharging Sediment**

#### Effects of Lake Bed Excavation, Inlet and Shoreline Reclamation

- 5.13 The applicant proposes to remove some lake bed material to ensure there is adequate depth for boats. The applicant believes this volume to be modest, being 3000 m<sup>3</sup> of lake bed material being removed during stage 1, and 2,000 m<sup>3</sup> during stage 2. This will be undertaken using small machinery operating from the lake shore. The application does not outline a timeframe for these works, but due to the small area, and volumes proposed to be removed, this activity is not expected to take long.
- 5.14 The applicant has noted that prior to reclaiming the manmade inlet, the diversion of Marina Creek will occur first. The application outlines that the inlet will be filled with selected material that will be properly compacted and finished to car



park formation level. The application outlines that measures will be put in place to ensure soil erosion and any sediment entering water will be avoided.

- 5.15 Infilling of the inlet needs to be with acceptable material. Acceptable materials include bricks, ceramics, un-reinforced concrete, glass, road sub base, tiles and virgin soils (including rock, sand, gravel, clay). A recommended condition of consent will require any fill used on site to be fit for purpose.
- 5.16 The reclamation of the inlet will result in the area being returned to pre 1970's state. The area along the shoreline to be reclaimed is small.
- 5.17 Recommended conditions of consent will ensure that the effects from the proposed works will be appropriately mitigated and less than minor.

#### Effects of Placing Structures

- 5.18 The proposed 195 berth marina will consist of floating "fingers" that will be surrounded on the west and south side by a floating attenuator to protect the berths from wind and wave action. All these structures will be constructed on land, lifted into the lake by crane, and towed into position by boat. As such, there will be little lake bed disturbance associated with this activity.
- 5.19 The floating wave attenuator is proposed as the site conditions preclude the use of conventional rock armour or pile supported breakwaters. These breakwaters attenuate rather than suppress wave motion.
- 5.20 Typically, the wave attenuator will knock the top off steep waves. Short period wind waves will be rapidly dispersed. The reflected waves will not be directed onto the shores of the lake only out, into and down the lake so there will be no accelerated erosion effects on the lake shoreline.
- 5.21 While it anticipated that the placement of the wave attenuator will not cause increased erosion or scouring on the foreshore due to its placement, a recommended condition of consent will require the works not to cause scouring, erosion, flooding and property damage.
- 5.22 The floating fingers and wave attenuator structures will be anchored to the lake floor by bungee-like cords that will be attached to screw anchors. To confirm screw anchors are the best practicable option, the previous consent holder undertook a practical testing programme to install and test load two anchors at the marina location. This test was authorised by Land Use Consent 2006.262. It was this testing that determined the required diameter of the anchor plates.
- 5.23 The area of disturbance associated with the screw anchor installation is equal to the surface area of the screw face, being 1.5 m to 2 m in diameter. The screw anchor winds into the lake bed just as a wood screw winds into timber.
- 5.24 Each individual screw takes a short time to install. Once the barge, from where the anchor installation will be directed, is situated above the screw location, the screw anchor can be installed relatively quickly. The screws will be continually installed until all of them have been completed. These works are expected to take less than a few weeks.





- 5.25 The retaining wall will be created by driving piles and placing panels along the current lake shore. The disturbance will be limited to the area in close proximity to the structures.
- 5.26 It is also proposed to install jetty piles via a conventional driving method, along the face of the retaining wall, and remove and replace the existing wall of timber piles at the western end of the site. This activity can be undertaken relatively quickly, with machinery operating outside the lake bed, with only localised disturbance effects. This is also the case with relocating the existing jetty.
- 5.27 The floating buildings will be constructed outside the lake bed, and will be lifted into place via a crane, resulting in minimal disturbance to the lake bed.

#### Discharges of Sediment to Water

- 5.28 The proposed activities will result in discharges of sediment to the lake, either from lake bed material being re-suspended in the water column or by sediment laden water run-off from disturbed land at the site. Suspended sediment generated by the works will increase turbidity and may lead to adverse effects on visual amenity, water quality and aquatic habitats. Because Lake Wakatipu is naturally characterised by low suspended solids and high visual clarity of the water column, any increase in suspension of sediments is likely to be noticeable.
- 5.29 The main potential sources of suspended sediments include:
- Installation of the screws in the lake bed;
  - The placing of piles and concrete panels in and on the lake bed;
  - Reclamation of the foreshore and inlet; and
  - Sediment laden run off water runoff from the proposed earthworks.
- 5.30 The extent of sediment release and discolouration of the discharge is hard to quantify. However, the works are of a limited and temporary duration and as a result will not have a long temporal effect on water quality.
- 5.31 The removal of lake bed material, reclamation of the foreshore and inlet will require a large amount of earthworks for the necessary levelling of the existing ground and for re-structuring of the shoreline and lake bed. Sediment barriers will need to be placed at the lower margins of exposed earth surfaces prior to commencing the works associated with the reclamation of the foreshore. The sediment barriers should also extend along the entire frontage of the site with Lake Wakatipu. The applicant also proposes to place silt fences around the areas where lake bed material is being removed.
- 5.32 Prior to reclamation, the existing inlet will be closed off from the main body of Frankton Arm. A weir should be constructed with a silt fence positioned on the crest of the weir so that any flows overtopping the weir will be filtered prior to mixing with the main body of the lake.
- 5.33 Rainfall events on exposed earth can result in large quantities of sediment being released into surface water bodies. The applicant has discussed how the proposal will avoid remedy and mitigate the effect of storm water runoff during the

construction stage. During the construction stage of the works, it is proposed to include controls for erosion such as sediment ponds, and protective silt fences.

- 5.34 A recommended condition of consent is that the applicant provides a sediment management plan for the entire construction period, which details how the release of sediment during the construction phase of the works will be managed and treated prior to discharge to water. This shall be submitted prior to works commencing at the site
- 5.35 Recommended conditions of consent will also require the applicant to only operate in the wet bed if necessary and to undertake works when lake levels are low, where practical to minimise sediment discharges
- 5.36 In light of the above recommendations and given the assimilative capacity of Lake Wakatipu and that the majority of contaminant discharge will be sediment re-suspended from the lake bed, it is considered that the effects of the discharge will be no more than minor.

### **Effects on Aquatic Values**

- 5.37 Increased sedimentation can affect the functioning and behaviour of aquatic species and can also degrade or destroy aquatic habitats. It is therefore important to manage this potential effect. The works will be undertaken in the water column, which will increase the potential for the generation of sediment plumes. Best practice for 'instream' works requires separation of the works site from flowing water. However, due to the location of this site these best practice methods are not practically possible.
- 5.38 The construction of the marina is expected to have limited and localised effects on the macrophyte communities of the proposed area. These effects result from the proposed removal of areas of macrophyte beds to allow for the installation of the screw anchors. As charophytes are the dominant macrophytes in the proposed marina area and are abundant through Lake Wakatipu and other New Zealand lakes, the removal of small areas of macrophytes will have no more than a localised effect.
- 5.39 There are no unique or uncommon habitat areas within the vicinity of the proposed marina and fish are expected to relocate out of the area of impact during the construction works. It is anticipated that the installation of the screw anchors or the jetty piles and retaining wall will not impact on the wider natural values of Frankton Arm and Lake Wakatipu. Water quality is not expected to decrease as a result of the installation of the screw anchors and jetty piles although a temporary reduction in water clarity is anticipated associated with disturbance of the lake bed.
- 5.40 The proposed development will involve reclaiming the existing marina inlet area of Lake Wakatipu. As the ecological values of the inlet area are similar to that of the shallow area of the wider lake environment, the reclamation of this area is not expected to result in the loss of significant, uncommon or rare habitat.
- 5.41 The application has been assessed by the Council's Resource Science Unit (RSU) who noted that is likely that brown trout, rainbow trout, Chinook salmon,

common bully, longfin eel, and koaro are present in Lake Wakatipu in the vicinity of the proposed works. Common bully, brown trout, rainbow trout and koaro are present in Marina Creek.

- 5.42 The RSU went on to note the disturbance associated with the proposed works in Lake Wakatipu will cause short-term sedimentation issues in the area immediately surrounding the construction site, but this will have limited impact on fish as they will be able to move away from the affected area. It is likely that a significant visible sediment plume will be generated by the proposed works, however this will only be short-term in nature.
- 5.43 The RSU also noted that the applicant has proposed to build a concrete wall across the mouth of a small inlet where Marina Creek discharged in Lake Wakatipu and then use spoil of the lake bed excavation to infill this inlet. It is likely that this inlet provides habitat for the fish species described above as well as bird species including mallard duck, scaup, black swan and crested grebe. The proposed activity will result in the permanent destruction of this habitat, however the relatively small size of the inlet compared to the habitat available for these species throughout the rest of the lake should ensure that the effect of this activity on habitat availability will be no more than minor.
- 5.44 The RSU raised concerns that the applicant has not provided any information on how it proposes to prevent fish becoming trapped in the inlet as it is sealed off and infilled. Because the applicant has proposed to seal off the inlet before it is infilled, fish will not be able to leave the inlet and high mortality is likely to occur. The RSU has suggested, to avoid adverse effects the applicant must undertake fish removal before any infilling of the inlet occurs.
- 5.45 Recommended conditions of consent are included as suggested by the RSU. In light the above, effects on aquatic values will be less than minor.

### **Effects on Lake Values**

- 5.46 The proposed works may have potentially adverse effects on:
- Natural character;
  - Visual amenity;
  - Heritage;
  - Public Access; and
  - Cultural Values.
- 5.47 The section of Lake Wakatipu where the proposed works are to occur is a modified area. The man made inlet was created in the 1970's, and there are several boat ramps and jetties in the surrounding area also. The site has been gazetted as an area for a marina under the QLDC's District Plan. Though the proposed works will have an effect on the natural character of the lake, the area is already modified and the proposed area of foreshore reshaping is a small portion of the lake front. The perimeter of Lake Wakatipu is approximately 180 km long and the area of proposed impact is approximately 0.08% of this.
- 5.48 The proposed works are to occur in an area that has surrounding residential activity and the Queenstown Trail runs through the area and hence will be very observable to the public. As such it is recommended the proposed works are



undertaken between 7.30 am to 6 pm. No works are to occur in weekends or Public holidays, when use of the area is likely to be highest. This will minimise effects on natural character, visual amenity and public access.

- 5.49 Public access will be restricted in the immediate area of the works primarily for public safety, but this effect will be short term and localised.
- 5.50 There are no Schedule 1C values that will be affected by the proposed works. Lake Wakatipu is recognised as having significant spiritual and cultural beliefs, values and use of significance to Kai Tahu. TRONT were notified of the works but made no comment within the allocated 10 working days.
- 5.51 There are values identified in Schedule 1D of the RPW for Lake Wakatipu. KTKO were served notice of the applications, and have made a submission in opposition. KTKO wish to be heard in support of its submission. KTKO will discuss its concerns at the hearing.
- 5.52 It is recommended that an accidental discovery protocol condition be imposed. This will protect both historic and iwi values.

#### **Effects on other water users**

- 5.53 There are no Schedule 1B (Community Water Supply Values) for Lake Wakatipu that will be adversely affected by the works. In addition, there are no water takes in the immediate vicinity of the works that may be adversely affected. This section of the lake is unlikely to be used for permitted takes (i.e. stock water and domestic supply) due to the surrounding land use (urban) and reticulated water supply. Therefore, effects on existing water takes are considered to be no more than minor.
- 5.54 Recreational activities on Lake Wakatipu are likely to be temporarily affected by the proposed works; however, these effects will be localised and no more than minor. Once the marina is completed, recreational activities in the area will be enhanced.

#### **Effects on Marina Creek**

- 5.55 The applicant proposes to divert up to 55 m of the lower reaches of the creek from its current location, where it flows into the head of the manmade inlet, to a site directly to the south west.

#### Effects on the Hydraulic Capacity and Flow Characteristics of Marina Creek

- 5.56 Flow data for the creek was not discussed in the application. However, information outlined in the previous resource consent application for the site outlined that flows can be approximated by creating a hydrological model for the catchment. It has been previously calculated that runoff flows contributed to by the full catchment are expected to be approximately 1,968 L/s for a 5-year event and 3,441 L/s for a 50-year event. Permanent flows in the creek bed are expected to be substantially lower.
- 5.57 The applicant proposes to replace the current single 600 mm with a larger culvert which will be 750 mm diameter culvert and will be designed to accommodate a 20-year event which is greater than the current culvert capacity. The culvert



will act as a limiting factor in the downstream flow. Any flows over a 20 year event will discharge across the proposed car park and into the lake.

- 5.58 Once the diversion is completed, the applicant proposes to fill in the existing creek bed and reclaim it. The applicant proposes to use clean fill to reclaim the bed. It is a recommended condition of consent that only suitable fill is used to reclaim the existing channel of the creek
- 5.59 The application has been reviewed by the Council's Engineering Hazards and Science Unit (EHSU) who have no concerns with the proposed application as assessed under this Council's jurisdiction provided that similar conditions are recommended that were included on the now lapsed conditions of consents previously granted for the site.
- 5.60 It is accepted that proposed works have been designed by a suitably qualified professional and the proposal in the application will be designed appropriately to ensure adverse effects do not occur.
- 5.61 Standard conditions require the diversion to not cause any flooding, erosion, land instability or property damage of any other person's property. Conditions have also been recommended that require the applicant to notify the Council prior to the works occurring.
- 5.62 In light of the above the effects of the hydraulic capacity and flow characteristics of Marina Creek will be less than minor.

#### Effects on Aquatic Ecosystems

- 5.63 The RSU have reviewed the application and commented that although the applicant has not completed a fish survey, it is likely that the creek is used as a spawning and rearing stream of brown and rainbow trout, and will provide habitat for koaro.
- 5.64 The RSU went on to comment that it is likely that a 55 m long pipe will prevent upstream migration of most fish species, and further mitigation will be required to reduce the impact of this activity.
- 5.65 The RSU has suggested that the following consent conditions are included to insure that any significant adverse effects of the proposed activity are avoided, remedied or mitigated
- All culverted sections of Marina Creek shall be constructed using a box culvert design that maintains the existing gradient of the creek and retains the existing gravel/cobble substrate, while having sufficient capacity to provide for flood flows.
  - For both the construction of the marina and the works within Marina Creek, the applicant should ensure that best practice sediment management is undertaken to minimise the wider impacts of the proposed works.
- 5.66 The RSU concluded that with the addition of the suggested conditions, it is likely that the effects of the proposed activity on Marina Creek will be less than minor.



- 5.67 Conditions of consent reflecting those suggested by the Councils RSU are recommended as conditions of consent. Recommended conditions of consent will also ensure that fish passage is maintained at all times and that no fish become stranded as a result of the diversion. A condition is also included that no machinery will be operated from within the wet bed of the creek.
- 5.68 If the activity is undertaken in accordance with the conditions recommended above, effects on aquatic values will be less than minor.

#### Effects on River Values

- 5.69 The proposed diversion, piping and reclamation of the bed of Marina Creek could have potential adverse effects on:
- Natural character;
  - Visual amenity;
  - Heritage;
  - Public Access;
  - Other water users and/or
  - Cultural Values (Schedule 1D).
- 5.70 The diversion and piping will alter the natural character of the watercourse but this effect is not considered to be more than minor, due to the already modified nature of the creek. The works will not affect the natural flow characteristics or water quality of the river.
- 5.71 The effect of piping 55 m of the creek may reduce the visual amenity, however this will be no more than minor, as the creek is currently piped under Sugar Lane.
- 5.72 As discussed, it is recommended the proposed works are undertaken between 7.30 am to 6 pm, Monday to Friday. No works are to occur in the weekends or Public holidays to maintain public amenity. In addition, a standard condition of consent has been recommended that requires the works area to be tidied on completion of the diversion.
- 5.73 There is no recognised heritage or cultural values associated with the watercourse and no more than minor effects are anticipated. A standard condition has been imposed that requires an accidental discovery protocol to be in place during the works.
- 5.74 There are no downstream water users or structures which may be adversely affected by the diversion of the tributary. The diversion will be contained completely within the subject site.

#### **Effects of Machinery Operating Onsite**

- 5.75 The discharge of contaminants from machinery working in or near water, such as diesel and lubricants, can cause adverse effects to aquatic fauna. Accidental spills and discharges can be minimised by:
- Storing any possible contaminants on site in bunded facilities away from the lake;
  - Refuelling machinery well away from water or the bed of the lake; and
  - Operating well maintained and clean machinery, to prevent leaks.



- 5.76 There is also the potential for machinery and other equipment to transport pest plant species onto the site and contaminate Lake Wakatipu and Marina Creek. To ensure adverse effects from this are avoided, it is recommended that all machinery should be water blasted prior to being brought on site and following completion of the works, to reduce the potential for pest species being introduced to or taken from Marina Creek or Lake Wakatipu. The applicant will also need to ensure that any wash water does not directly discharge into the lake or any other surface water body.
- 5.77 A recommended condition of consent will require the applicant to ensure that no contaminants, including fuel, oil, cement or cement products, enter Lake Wakatipu or Marina Creek.
- 5.78 All fuel storage tanks and machinery working and stored in the construction area should be maintained at all times to prevent leakage of oil and other contaminants into the lake. A further recommended condition of consent will require no refuelling of machinery within the lake or creek.

#### **Effects of Aquatic Pest Plants**

- 5.79 Lakes in the Otago area contain some aquatic pests. Lake Wakatipu contains *Didymosphenia geminata* and previously a small area of *Lagarosiphon major* near the marina has recently been eradicated. Objective 4.6.2 of the Council's Pest Management Strategy for Otago 2009 (the Strategy), seeks to prevent the spread of *Lagarosiphon major* in Lake Wakatipu.
- 5.80 It is important that Lake Wakatipu is kept free of aquatic pest species. Several submitters have raised concerns with the potential effect of pest plant infestation.
- 5.81 The applicant proposes to install a boat wash down area as part of the facility, which is likely to reduce the potential for transferring aquatic pest species to the lake.
- 5.82 The Council's Environmental Monitoring and Operations Unit (EMOU) has reviewed the application and raised concerns with the risk of freshwater pest contamination (particularly *Lagarosiphon major*) from either lake bed disturbance or contamination from construction equipment.
- 5.83 To address these issues during the construction phase within the lake, EMOU recommend that the following provisions are included as conditions of any relevant consents granted:
- A condition for didymo prevention;
  - A condition for ensuring any equipment used near or in the lake has been checked, cleaned and dried before its first use and any time it is removed from site for use elsewhere in accordance with the National Pest Control Agencies' machine Hygiene Standards covered in the best practice guideline document A16 titled 'Keep It Clean' dated September 2013.
  - During construction that involves work within the lake bed, the consent holder be required to ensure the control of any freshwater pests within the footprint of the proposed marina. This will require an inspection maintenance plan, with scheduled inspections involving appropriate skilled



person/s so they can identify any infestations and determine a suitable plan to manage its removal.

- 5.84 Conditions of consent are recommended that will address the potential of adverse effects due to pest plants during the term of consent.
- 5.85 There will be an ongoing need for boat owners to be made aware of the potential for aquatic pest species to enter the lake and to take precautions and provide advice to stop them entering the lake.
- 5.86 The applicant should be aware of its obligations under the Council's Strategy, ensuring that even after consents for the marina construction have expired, it is still responsible to destroy any Lagarosiphon major that is in the area that the marina occupies in accordance with Rule 4.6.4 of the Strategy.
- 5.87 The Council will also be advocating via a submission to the application before the QLDC for the marina to ensure that an ongoing freshwater pest management plan related to the marina is in place once construction is completed.

#### **Long Term Impacts of the Proposed Marina**

- 5.88 Jurisdiction over the long term operation of the marina falls to QLDC and is therefore outside the scope of this report. However, it is prudent to mention concerns raised by Council staff when assessing this application regarding the on-going operation of the proposed marina.
- 5.89 The construction phase of the marina is likely to have short-term impacts on water quality due to sedimentation. However, the long-term effects of 195 boats using this facility are also of concern. Oil spills and leaching of antifouling chemicals and other contaminants pose a significant risk to the water quality of Frankton Arm, potentially affecting the nationally rare and pollution sensitive bryophyte communities found in the lake.
- 5.90 Increased boat traffic may also increase wave action resulting in lake shore erosion and scouring on the banks of the lake. This long term effect will need to be managed appropriately to ensure that any damage is avoided, remedied or mitigated.

#### **Consideration of Alternatives**

- 5.91 In terms of other locations for the marina, the applicant has considered Kelvin Heights as another feasible location, providing adequate size for the marina. However, the application notes that the site is a very popular beach, and is used for water skiing. The applicant also believes that there would be strong opposition to the proposal due to the loss of these amenities and effects on nearby residents. The applicant also raised the distance via road to Kelvin Heights from Queenstown as an issue.
- 5.92 In terms of alternative break water structures previous studies outline that the nature of the lake bed prevents traditional rock armour designs being used for the breakwater. The rock would continue to sink into the lakebed until a level is reached where the soil would be capable of bearing the weight of the breakwater. The low weight bearing soil would require a disproportional amount of rock to



be used until equilibrium is found. The foundation conditions and its economic impact mean that it is not practicable to use conventional fixed rock armour breakwaters or other types of breakwater which rely on weight for stability. The applicant believes that the floating wave attenuator is capable of providing the required wave protection at the proposed location. The wave periods are short and can be effectively attenuated by a floating breakwater.

- 5.93 The reclamation proposals are site specific and have been purposely built into the proposal to enhance natural use values of the lake, by accommodate the car parking while minimising the required excavations on the site. The applicant has stated that no unique or uncommon habitat will be lost through the reclamation process and that any habitats that may be impacted due to the reclamation are expected to recover following the completion of the works. The reclamation is not seen by the applicant to exacerbate flood risk to any other properties.
- 5.94 The applicant considered keeping Marina Creek as an open channel, however decided not to pursue this option, citing engineering issues and safety issues.

## **6. Statutory Considerations**

- 6.1 Section 104 of the Act sets out the matters to be considered when assessing an application for resource consent. These matters are subject to Part 2, the purpose and principles, which are set out in Sections 5 to 8 of the Act. Those matters which should be considered for this application are as follows.

### **Part 2 of the Act**

- 6.2 Part 2 of the Act, the purpose and principles, is set out in sections 5 to 8 of the Act. Section 5(1) states that the purpose of the Act is to “to promote the sustainable management of natural and physical resources. Section 5(2) defines sustainable management as “managing the use, development and protection of natural and physical resources in a way, or at a rate which enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety” while:
- (a) “sustaining the potential of natural and physical resources, (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
  - (b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
  - (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.”
- 6.3 Provided the activity is undertaken in accordance with the application and recommended consent conditions, the proposed activity should not compromise the potential of surrounding natural and physical resources to meet the reasonably foreseeable needs of future generations.
- 6.4 The proposed activity should not compromise the life-supporting capacity of air, water, soil or ecosystems. The effects of the construction works or the ongoing discharges will not adversely affect the life supporting capacity of the lake or the creek, providing conditions of consent are complied with. Conditions of consent will also require that any unexpected effects are quickly identified, and mitigated.



- 6.5 The applications are considered to be consistent with Section 5 of the Act
- 6.6 Section 6 of the Act requires that certain matters of national importance be recognised and provided for. Of relevance to these applications are:
- The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development.
  - The maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers
  - The relationship of Maori and their culture and traditional with their ancestral lands, water, sites waahi tapu and other taonga.
- 6.7 As the area of the proposed works is already highly modified and developed, the works are unlikely to adversely affect natural features and landscapes. While public access may be restricted for the duration of the proposed works for safety reasons, the public will still have access to the lake in this area via the Frankton Track. Once the works are completed, public access will be restored.
- 6.8 It is considered that Section 6 and matters of national importance have been recognised and provided for in the processing of these applications. It is also noted that KTKO has submitted on the proposal and will speak in support of their submission
- 6.9 In assessing this application, Section 7 of the Act requires particular regard be had to various matters. In the context of the present application the following matters are relevant:
- (a) kaitiakitanga;
  - (aa) the ethic of stewardship;
  - (b) the efficient use and development of natural and physical resources;
  - (d) intrinsic values of ecosystems;
  - (e) recognition and protection of the heritage values of sites, buildings, places or areas; and
  - (f) the maintenance and enhancement of the quality of the environment.
  - (h) the protection of the habitat of trout;
- 6.10 Section 7(a) and 7(aa) have been considered in Section 5 of this report. Lake Wakatipu is a Statutory Acknowledgement Area and Iwi were served notice of the applications. KTKO has provided a submission on the applications.
- 6.11 With regard to the use and development of natural and physical resources, it is not considered, in the context of these applications, to be an inefficient use of these resources.
- 6.12 Section 7(c) was considered in Section 5 of this report, in which it was considered that amenity values, specifically visual amenity and public access to the lake will at least be maintained. A recommended condition will restrict the working hours in order to minimise effects on water users. Amenity effects on land and surface of the lake will be considered further by the QLDC.
- 6.13 With respect to Section 7(d) and (h), the effects have been discussed in Section 5 of this report. Recommended consent conditions will ensure that any potential

adverse effects on terrestrial and aquatic species and their habitat as a result of the works are, in the first instance, avoided where practicable or mitigated, such that any effects will be no more than minor.

- 6.14 As the recommended conditions of consent provide for the incidence of cultural or historical discovery, the heritage values of sites, buildings, places or areas, which may be affected by the proposed works, have been recognised and protected
- 6.15 With respect to Section 7(f), the proposed works are anticipated to at least maintain, if not enhance, the quality of the environment.
- 6.16 With respect to Section 8 of the Act, the applications are not considered to be inconsistent with the Treaty of Waitangi.
- 6.17 Overall, the application is considered to be consistent with Part 2 of the Act, given the minor nature of the activity and the proposed conditions of consent.

#### **Section 104(1) of the Act**

- 6.18 The remaining matters of Section 104(1) to be considered when assessing an application for a resource consent are as follows:
  - (a) *any actual and potential effects on the environment of allowing the activity; and*
  - (b) *any relevant provisions of*
    - (i) *a national environmental standard;*
    - (ii) *other regulations;*
    - (iii) *a national policy statement;*
    - (iv) *a New Zealand coastal policy statement;*
    - (v) *a regional policy statement or proposed regional policy statement;*
    - (vi) *a plan or proposed plan; and*
  - (c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*

- 6.19 These matters are discussed in the following sections.

#### **Environmental Effects**

- 6.20 The actual and potential environmental effects of the proposed activity were considered in Section 5 of this report. Given that the nature of the activities are expected to be temporary, localised and provided recommended consent conditions are complied with, any adverse environmental effects should be avoided, remedied or mitigated.

#### **National Policy Statement Freshwater Management**

- 6.21 The NPS for Freshwater Management provides overarching objectives and policies for managing the quality and quantity of freshwater resources in New Zealand. Policies A1 and A2 require the Council to make changes to existing plans in order to establish freshwater objectives and freshwater quality limits for all bodies of freshwater and to establish methods (including rules) to avoid over-allocation. Until changes to the RPW to give effect to Policy A1 and Policy A2 have become operative, the following policy applies:



*When considering any application for a discharge the consent authority must have regard to the following matters:*

- the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and*
- the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.*

6.22 As discussed in Section 5 above, the discharge will not have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water.

### **Regional Policy Statement**

6.23 The most relevant objectives and policies are contained in Chapter 4 (Manawhenua Perspective), Chapter 5 (Land), Chapter 6 (Water), Chapter 9 (Built Environment) and Chapter 11 (Natural Hazards).

6.24 Chapter 4 includes objectives relating to cultural values and places of significance, and the need to recognise and provide for these values and places. In particular, Objectives 4.4.1 (recognising and providing for waahi tapu (sacred places such as burial places)), 4.4.2 (recognising and providing for waahi taoka (treasured resources)), 4.4.3 (recognising the principle of wairua and mauri in managing Otago's water bodies), 4.4.4 (maintaining and enhancing mahika kai (food) procuring places) and 4.4.5 (kaitiakitanga or guardianship) are relevant to these applications. Recommended conditions of consent will ensure that the proposed activities are undertaken in a manner consistent with these objectives.

6.25 Chapter 5 includes objectives relating to the effects of land based activities on natural and physical resources. Objective 5.4.2, avoiding, remedying or mitigating degradation of Otago's natural and physical resources resulting from activities utilising the land resource, is relevant to these applications. Recommended conditions of consent will ensure that any adverse effects resulting from the construction of the proposed structures will be avoided, remedied or mitigated, such that any effects during and following construction will be no more than minor.

6.26 The objectives and policies in Chapter 6 seek to safeguard, maintain and enhance the values of Otago's water resources. The objectives and policies of particular relevance to these applications seek to:

- safeguard the life-supporting capacity of Otago's water resources (Objective 6.4.3);
- maintain and enhance the ecological, intrinsic, amenity and cultural values of Otago's water resources (Objective 6.4.4);
- avoid, remedy or mitigate degradation of the water resource resulting from the use, development or protection of the beds and banks of water bodies (Objective 6.4.5),
- mitigate the threat of flooding and riverbank erosion, resulting from the use, development or protection of water bodies ( Objective 6.4.6),



- maintain and enhance public access (Objective 6.4.7 and Policy 6.5.10),
  - maintain and enhance riparian margins (Policy 6.5.7), and
  - allow for the community's use, development or protection of the beds and banks of water bodies, providing adverse effects are avoided, remedied or mitigated, while considering the maintenance and enhancement of the natural function of the river system and the need to provide mitigation for flooding and erosion (Policy 6.5.9).
- 6.27 The effects of the proposed works on the life supporting capacity of Lake Wakatipu and Marina Creek were discussed in Section 5 of this report, as were the effects on the surrounding ecological, intrinsic, amenity and cultural values. As suggested by Objective 6.4.3 and 6.4.4, due weight has been afforded to protecting these values in the applicant's design of the proposed works, and in recommended conditions of consent. The proposed works are considered to be consistent with the remaining objectives and policies outlined above, as discussed in Section 5 of this report.
- 6.28 Chapter 9 relates to the built environment. Policy 9.5.4 is of particular relevance to these applications. It seeks to minimise the adverse effects of structures on the environment, through avoiding, minimising or mitigating discharges of contaminants to water and visual intrusion and a reduction in landscape qualities. It also seeks to minimise significant irreversible effects on natural values and character, values of significance to Kai Tahu, intrinsic values of ecosystems and habitats of indigenous fauna, heritage values, amenity values, and salmon or trout habitat. The proposed activities, subject to recommended conditions of consent, will be consistent with Policy 9.5.4.
- 6.29 Chapter 11 seeks to avoid or mitigate the effects of natural hazards and natural hazards mitigation works. The objectives and policies of particular relevance to these applications are discussed below.
- Objective 11.4.1: To recognise and understand the significant natural hazards that threaten Otago's communities and features.
  - Objective 11.4.2: To avoid or mitigate the adverse effects of natural hazards within Otago to acceptable levels.
  - Objective 11.4.4: To avoid, remedy or mitigate the adverse effects of hazard mitigation measures on natural and physical resources.
  - Policy 11.5.1: To recognise and provide for Kai Tahu values in natural hazard planning and mitigation.
  - Policy 11.5.2: promotes that action should be taken to avoid or mitigate unacceptable levels of adverse effect of natural hazards, and the responses to them, on human life, infrastructure and the natural environment.
- 6.30 As discussed in Section 5 of this report, any adverse effects as a result of the proposed activities will be avoided, remedied, mitigated subject to recommended conditions of consent and therefore the applications will be consistent with Chapter 11.
- 6.31 Overall it is considered the proposal is consistent with the RPS

## **Regional Plan: Water for Otago**

- 6.32 Relevant objectives and policies of the RPW are found in Chapter 5 (Natural and Human Use Values of Lakes and Rivers), Chapter 7 (Water Quality) and Chapter 8 (The Beds and Margins of Lakes and Rivers). The most relevant policies of the RPW are as follows:

*Policy 5.4.2 In the management of any activity involving surface water, groundwater or the bed or margin of any lake or river, to give priority to avoiding, in preference to remedying or mitigating:*

- (1) *Adverse effects on:*
  - (a) *Natural values identified in Schedule 1A;*
  - (b) *Water supply values identified in Schedule 1B;*
  - (c) *Registered historic places identified in Schedule 1C, or archaeological sites in, on, under or over the bed or margin of a lake or river;*
  - (d) *Spiritual and cultural beliefs, values and uses of significance to Kai Tahu identified in Schedule 1D;*
  - (e) *The natural character of any lake or river, or its margins;*
  - (f) *Amenity values supported by any water body; and*
- (2) *Causing or exacerbating flooding, erosion, land instability, sedimentation or property damage.*

- 6.34 As discussed in Section 5 of this report, natural values have been considered and any effect on natural values will be localised and temporary. There are no water supply values associated with the site. There are no registered historic sites associated with the proposed activities. The recommended conditions of consent will provide for archaeological discovery during the works applied for under these applications. Iwi have made submissions on the applications and the Kai Tahu Natural Resources Management Plan 2005 has been considered in regard to these applications.

- 6.35 The area of proposed disturbance when compared to the size of Lake Wakatipu is insignificant. The proposed area of the works is already highly modified when compared to other more pristine areas of the lake. The proposed marina will provide for additional recreational activities on the lake such.

- 6.36 A recommended condition of consent will require the applicant to ensure that the proposed works do not cause or exacerbate flooding, erosion, land instability, sedimentation or property damage. Provided recommended conditions of consent are complied with, the proposed works are consistent with the above policy.

*Policy 5.4.3 In the management of any activity involving surface water, groundwater or the bed or margin of any lake or river, to give priority to avoiding adverse effects on:*

- (a) *Existing lawful uses; and*
- (b) *Existing lawful priorities for the use, of lakes and rivers and their margins.*

- 6.37 As effects on the existing use of Lake Wakatipu relates to Section 9 of the Act, these effects are considered by QLDC during its assessment of the proposal.



*Policy 5.4.4 Recognises Kai Tahu's interests in Otago's lakes and rivers by promoting opportunities for their involvement in resource consent processing.*

*Iwi were advised of the applications and submissions were received by iwi. Regard has been given to the Kai Tahu Natural Resources Management Plan 2005 when assessing these applications and, therefore, the processing of these applications is consistent with the above policy.*

*Policy 5.4.5 Seeks to recognise the Water Conservation (Kawarau) Order 1997 by:*

- (a) Preserving, as far as possible, the waters set out in Schedule 1 of the Water Conservation Order in their natural state;*
- (b) Protecting the outstanding characteristics of waters set out in Schedule 2 of the Water Conservation Order; and*
- (c) Sustaining the outstanding amenity and intrinsic values set out in Schedules 1 and 2 of the Water Conservation Order.*

6.38 As discussed in Section 5 of this report, the fishery values of the lake will not be compromised by this activity, as fish will migrate out of the area during the works but will move back into the area once the works have ceased. The scenic characteristics of this particular area of the lake have already been modified by the creation of the manmade inlet which will be reclaimed. The ecological survey undertaken by the applicant found no bryophytes in the affected area. The marina will support the recreational boating objective of the WCO. With regard to iwi values, KTKO have submitted on the application and will speak in support of its submission.

*Policy 5.4.6 Legal public access to and along the margins of lakes and rivers will only be restricted where necessary:*

- (a) To protect areas of significant indigenous vegetation and/or significant habitats of indigenous fauna;*
- (b) To protect Kai Tahu spiritual and cultural beliefs, values and uses;*
- (c) To protect the health or safety of people and communities;*
- (d) To ensure a level of security consistent with the purposes of a resource consent; or*
- (e) In other exceptional circumstances sufficient to justify the restriction notwithstanding the national importance of maintaining that access.*

*Policy 5.4.7 Where existing public access to or along the margins of Otago's lakes or rivers is restricted by activities in, on, under or over the bed or margin, the provision or enhancement of alternative access:*

- (a) May be required with respect to the restriction of existing legal public access; and*



- (b) *Will be promoted with respect to the restriction of informal access arrangements.*

6.39 Public access along the foreshore of the lake will be restricted while the works are being undertaken. However, once the works are completed, the applicant has stated that public access will be provided for. During the works the public will still be able to access the lake through other areas along the Queenstown Trail. Public access on the surface of the lake is considered under Section 9 of the Act and, therefore, falls under QLDC jurisdiction.

*Policy 5.4.8 To have particular regard to the following features of lakes and rivers, and their margins, when considering adverse effects on their natural character:*

- (a) *The topography, including the setting and bed form of the lake or river;*  
(b) *The natural flow characteristics of the river;*  
(c) *The natural water level of the lake and its fluctuation;*  
(d) *The natural water colour and clarity in the lake or river;*  
(e) *The ecology of the lake or river and its margins; and*  
(f) *The extent of use or development within the catchment, including the extent to which that use and development has influenced matters (a) to (e) above.*

6.40 Given the size of Lake Wakatipu and the modified area in which the marina is proposed to be constructed, it is expected that adverse effects on any of the above provisions will be no more than minor. The habitat found at the marina site is not considered rare or uncommon. It is not anticipated that the alteration to the foreshore, the reclamation of the inlet or the diversion of the tributary will have any adverse effect on water quality more than a localised and temporary nature. The natural lake levels and flow characteristics are unlikely to be adversely affected by the proposed works. Consequently, it is considered that the proposal is consistent with the above policy.

*Policy 5.4.9 To have particular regard to the following qualities or characteristics of lakes and rivers, and their margins, when considering adverse effects on amenity values:*

- (a) *Aesthetic values associated with the lake or river; and*  
(b) *Recreational opportunities provided by the lake or river, or its margins.*

6.41 The aesthetics of the marina and buildings fall under Section 9 of the Act and are considered by QLDC in its assessment of the applications. The alteration of the foreshore and diversion of Marina Creek are occurring in a modified area of the lake and will provide for increased recreational opportunities. Therefore, these applications are consistent with the above policy.

*Policy 5.4.10 In the management of any activity involving surface water or the bed or margin of any lake or river, particular regard will be given to the heritage value of any site, building, place or area.*



- 6.42 The proposed area of the works is not listed in Schedule 1C of the RPW as a registered historic site. Heritage New Zealand Pouhere Taonga (HNZ) has not made a submission on the applications before the Council. Recommended conditions of the consents provide for the incidence of archaeological discovery and therefore these applications are consistent with the above policy

*Policy 7.B.2*                      *Avoid objectionable discharges of water or contaminants to maintain the natural and human use values, including Kāi Tahu values, of Otago lakes, rivers, wetlands, groundwater and open drains and water races that join them.*

- 6.43 The discharge will not be objectionable, and natural and human use values will be maintained.

*Policy 7.B.3*                      *Allow discharges of water or contaminants to Otago lakes, rivers, wetlands and groundwater that have minor effects or that are short-term discharges with short-term adverse effects.*

- 6.44 The discharge will be temporary while construction activities take place, the effects will also be short term.

*Policy 7.B.8*                      *Encourage adaptive management and innovation that reduces the level of contaminants in discharges.*

- 6.45 The requirement for a sediment management plan will provide for adaptive management of the discharge of sediment to water.

*Policy 8.4.1*                      *When managing activities in, on, under or over the bed or margin of any lake or river, to give priority to avoiding changes in the nature of flow and sediment processes in those water bodies, where those changes will cause adverse effects:*

- (a) On the stability and function of existing structures located in, on, under or over the bed or margin of any lake or river;*
- (b) Arising from associated erosion or sedimentation of the bed or margin of any lake or river, or land instability; or*
- (c) Arising from any reduction in the flood carrying capacity of any lake or river.*

- 6.46 It is considered that the proposed works, including the placement of the wave attenuator, the reshaping of the foreshore and the diversion of Marina Creek will not adversely affect the nature of the flow of the lake or its tributary, nor will sediment processes be adversely affected. As such the proposed works are consistent with the above policy.



*Policy 8.5.1*                      *To require, where necessary, desirable and practicable, any structure in or on the bed of any lake or river to provide for fish migration through or past it, or alternative remedial measures where fish migration is not practicable.*

6.47 Recommended conditions of consent will require fish passage to be maintained. In addition, it is also a recommended condition of the consents that the applicant does not allow the stranding of any fish to occur during any reclamation and diversion works. Consequently, providing conditions of consent are complied with, the applications are consistent with the above policy.

*Policy 8.6.1*                      *In managing the disturbance of the bed or margin of any lake or river, to have regard to any adverse effect on:*  
*(a) The spawning requirements of indigenous fauna, and trout or salmon;*  
*(b) Bed and bank stability;*  
*(c) Water quality;*  
*(d) Amenity values caused by any reduction in water clarity; and*  
*(e) Downstream users.*

6.48 Given the size of the proposed works when compared to Lake Wakatipu, fish spawning will not be adversely affected by the applications. The applicant proposes to reinstate the bank and bed. Any reduction in water quality and water clarity are expected to be temporary and localised in nature. It is not expected that any downstream water users will be adversely affected by the application. Therefore, the applications are consistent with the above policy.

*Policy 8.6.2*                      *To promote best management practices for activities that occur within or adjacent to the bed of lakes and rivers in order to avoid, remedy or mitigate any adverse effect.*

6.49 A recommended condition of consent will require the applicant to provide a comprehensive sediment management plan to ensure that best practice is being followed. As such, providing recommended conditions of the consents are complied with, the applications are consistent with the above policy.

*Policy 8.7.2*                      *To prohibit the introduction of any plant included in any pest management strategy in force in Otago, to any part of the bed or water of any Otago lake or river.*

6.50 A recommended condition of consent will require all machinery brought on-site during construction to be washed before entering and upon leaving the site. It is, therefore, considered that the application is consistent with this policy.

*Policy 8.8.1*                      *To consider practical alternatives to:*  
*(a) The reclamation of the bed of any lake or river; and*  
*(b) The deposition of any substance in, on or under, the bed or margin of any lake or river.*



6.51 The reclamation of the bed of Marina Creek has been considered by the applicant. The reclamation of a small area the foreshore will be offset by the new development which provides public access. The applicant is also reclaiming an artificial inlet which was excavated in the 1970's. The applicant states that the development was designed to take advantage of the existing inlet to reduce additional earthworks. Consequently, the proposals are consistent with the above policy.

*Policy 8.8.2 To require only cleanfill be used to create any reclamation of the bed of a lake or river*

6.52 A recommended condition of consent will require the applicant to use suitable cleanfill.

6.53 Overall, subject to the recommended conditions of consent, these applications are consistent with the relevant objectives and policies of the RPW.

### **Other Matters**

#### Kai Tahu ki Otago Natural Resource Management Plan 2005

6.54 The Kai Tahu ki Otago Natural Resource Management Plan 2005 (NRMP) outlines general policies for activities within Otago. The following requirements apply to river and instream works:

- To require that work be undertaken when water levels are naturally low or dry.
- To require that works are not undertaken during spawning season of certain fish species and fish passage is provided for at all times.
- To require that any visual impacts at the site of the activity are minimal.
- To require that all practical measures are undertaken to minimise sediment or other contaminant discharge and that wet concrete does not enter active flow channels.
- To require that machinery only enters the wet bed of the waterway to the extent necessary to undertake the work, and that it is kept clean and well-maintained, with refuelling occurring away from the waterway. Machinery operating in flowing water is to be discouraged

6.55 The proposed activities are consistent with the above policies of the NRMP. The affected Papatipu Runaka did not identify any potentially affected species with regard to spawning and provided a submission on the applications. The other matters have been provided for through the conditions of consent.

6.56 Providing recommended conditions of consent are complied with, the proposed activities are consistent with the above policies of the management plan. The affected Papatipu Runaka was invited to make a submission. A submission was received

6.57 Recommended conditions of consent provide for cultural discovery events. If such an event occurs the applicant will be required to stop work immediately and notify the Council, Tangata whenua and HNZ and in the case of skeletal remains, the New Zealand Police. In addition, a site inspection will need to be undertaken



by the HNZ and the appropriate runanga and their advisors, who shall determine whether the discovery is likely to be extensive, if a thorough site investigation is required, and whether an Archaeological Authority is required

- 6.58 Should any koiwi tangata be discovered, it shall be handled and removed by tribal elders responsible for the tikanga (custom) appropriate to its removal or preservation. Site work shall only recommence following consultation with the Council, the HNZ, Tangata whenua, and in the case of skeletal remains, the New Zealand Police, provided that any relevant statutory permissions have been obtained.
- 6.59 In addition, if the applicant discovers any feature or archaeological material that predates 1900, or heritage material, or disturbs a previously unidentified archaeological or heritage site, the applicant shall stop work without delay and advise the Council, the HNZ, and in the case of Maori features or materials, the Tangata whenua. If required, the applicant shall arrange for a suitably qualified archaeologist to undertake a survey of the site and make an application for an Archaeological Authority pursuant to the Heritage New Zealand Pouhere Taonga Act 2014.
- 6.60 The applications and proposed consent conditions meet the policies of the management plan where practicable.
- 6.61 There are no other matters considered relevant or reasonably necessary to determine the applications.

#### **Section 105(1) of the Act**

- 6.62 Section 105(1) of the Act states that where an application is for a discharge permit to do something that would otherwise contravene Section 15 or Section 15B of the Act, *“the consent authority must, in addition to the matters in section 104(1), have regard to –*
- (a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
  - (b) the applicant’s reasons for the proposed choice; and*
  - (c) any possible alternative methods of discharge, including discharge into any other receiving environment.”*
- 6.63 The above matters have been considered in Sections 2 and 5 of this report. The discharge will comprise sediment generated during instream works and earth disturbance. There is not expected to be any adverse effects from the discharge and there are no alternatives.

#### **Section 107 of the Act**

- 6.64 Section 107(1) of the Act states that a discharge permit shall not be granted (with certain exceptions) if, after reasonable mixing, the contaminant or water discharged is likely to give rise to all or any of the following effects in the receiving waters:
- (c) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended material;*
  - (d) Any conspicuous change in the colour or visual clarity;*
  - (e) Any emission of objectionable odour;*
  - (f) The rendering of fresh water unsuitable for consumption by farm animals;*



*(g) Any significant adverse effects on aquatic life.*

- 6.65 The discharge is not expected to cause any of the effects listed under Section 107(1) (c), (e), (f) and (g) of the Act after reasonable mixing, provided the recommended consent conditions are imposed.
- 6.66 However there may be a time where there is a conspicuous change in the colour or visual clarity of water in the lake. Section 107(2) outlines that the Council may grant consent that may allow any effects identified in Section 107(1) to occur if it is satisfied:
- (a) That exceptional circumstances justify the granting of the permit; or*
  - (b) That the discharge is of temporary nature; or*
  - (c) That the discharge is associated with necessary maintenance work – and that it is consistent with the purpose of this Act to do so.*
- 6.67 The discharge under Discharge Permit RM14.026.03, although sought for a long term will be localised and temporary in nature, as it will only occur during the construction phase. The applicant will take reasonable steps to prevent the release of suspended solids and mitigate any adverse effects caused by the discharge. It is also a recommended condition of consent that a sediment management plan is provided to the Council before the exercise of these consents. As such the discharge of sediment is consistent with Section 107(2)(b), and consent for the discharge may be granted.

## **7. Recommendation**

- 7.1 That the Otago Regional Council grants to Lakes Marina Projects Limited, Resource Consents RM14.026.01-03, subject to the terms and conditions set out in the attached draft

### **Reasons for the Recommendation**

- 7.2 Reasons for recommendation is as follows:
- (a) That it is expected that the adverse effects on the environment will be minor and can be adequately addressed through the recommended consent conditions.
  - (b) That the proposed activities are consistent with the requirements of the Act and the relevant statutory requirements.

### **Term**

- 7.3 The applicant has requested a term of 15 years. In light of the low level of effects expected, a term of 15 years for all consents is appropriate and is the recommendation of this report.



Christopher P Shaw  
**Manger Consents**





Our reference: A701976

Consent No. RM14.026.01

## **LAND USE CONSENT**

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Lakes Marina Projects Limited  
Address: C/- The Business Advisory Group Limited, Level 13, 34 Shortland Street, Auckland

To disturb, reclaim, remove and place structures and deposit material on, over or under the bed of Lake Wakatipu/Whakatipu-wai-maori and Marina Creek

for the purpose of constructing a marina

For a term expiring 1 December 2029

Location of consent activity: Lake Wakatipu/Whakatipu-wai-maori and an unnamed tributary of Lake Wakatipu/Whakatipu-wai-maori locally known as Marina Creek, approximately 130 metres south west of the intersection of Sugar Lane and Frankton Road (State Highway 6A), Frankton, Queenstown.

Legal description of consent location: Secs 48, 52, 53 and Blk XXI Shotover SD  
Pt Sec 39 Blk XXI Shotover SD  
Sec 1 SO 21582  
Sec 1 SO 24208

Mid-Point Map

Reference: NZTM 2000 E1262504 N5006069

### **Conditions**

#### **Specific**

1. The works shall be:
  - (a) Undertaken as described in the application for consent lodged with the Consent Authority on 4 February 2014 and further information submitted on 13 May 2014, 1 July 2014 and 10 November 2014; and
  - (b) As outlined in the plans outlined in Appendix 1 attached to this consent.If there are any inconsistencies between the application and this consent, the conditions of this consent shall prevail.

2. Works shall, as far as practicable, be undertaken when lake levels in Lake Wakatipu/Whakatipu-wai-maori and/or flows in Marina Creek are low.
3. The consent holder shall ensure that no fish become stranded, and fish passage is not impeded as a result of the works authorised by this consent.
4. Works authorised by this consent, shall not cause any flooding, erosion, scouring, land instability or property damage, or adversely affect water levels of Marina Creek. Should such effects occur the consent holder shall remedy any such damage?
5. Works resulting authorised by this consent shall only occur during the hours of 7.30 am to 6.00 pm, Monday to Friday. Works shall not be undertaken on Weekends or Public Holidays.
6. The consent holder shall ensure that:
  - (a) the inlet is closed off from the lake by a bund prior to its reclamation; and
  - (b) only clean fill material is used for the reclamation of the bed of Lake Wakatipu/Whakatipu-wai-maori and Marina Creek.
7. The Marina Creek diversion pipe shall:
  - (a) Be no greater than 55 metres in length;
  - (b) Have a diameter of not less than 750 millimetres;
  - (c) Maintain fish passage to and from Lake Wakatipu/Whakatipu-wai-maori.
  - (d) Shall be constructed using a box culvert design that maintains the existing gradient of the creek and the existing gravel/cobble substrate.

### **Performance Monitoring**

8. The consent holder shall notify the Consent Authority in writing at least five working days prior to the commencement of work authorised by this consent, and at the completion of work authorised by this consent.
9. The consent holder shall supply:
  - (a) “As built” plans and photographs of the marina and appurtenant structures; and
  - (b) A flood hazard map which shows the areas of inundation of the site when the lake levels are at RL 312 m and RL 313 m.To the Consent Authority within three months of completion of the works.
10. Prior to works commencing, the consent holder shall submit a freshwater pest management plan to the Consent Authority. The plan shall apply to the entire footprint of the proposed marina works within Lake Wakatipu/Whakatipu-wai-maori and include but not be limited to:
  - (a) An outline of schedules of regular inspections of the lake area within the footprint of the marina works, to be carried out by an appropriately qualified person/s; and
  - (b) Details as to what known freshwater pests are to be inspected for and

what action is to be taken if they are detected.

(c) Methods to remove pest plants.

11. Prior to works commencing the consent holder shall submit a lake shore erosion management plan to the Consent Authority. The plan shall include, but not be limited to:
  - (a) Outlines of regular inspections and surveys of the lake shore at, and surrounding the marina site by suitably qualified person/s;
  - (b) Methods to record any lake shore erosion as a result of the exercise of this consent, including surveys, photographs and aerial photography;
  - (c) Methods to remedy any erosion or scour as a result of the exercise of this consent.
  
12. All machinery and equipment that has been in watercourses shall be water blasted and treated with suitable chemicals or agents prior to being brought on site and following completion of the works, to reduce the potential for pest species being introduced to or taken from the watercourses, such as didymo. At no time during the exercise of this consent shall machinery be washed within the bed of a watercourse.
  
13.
  - (a) Work shall be undertaken with the minimum time required in the bed of Lake Wakatipu/Whakatipu-wai-maori and Marina Creek and with the minimum necessary disturbance;
  - (b) The consent holder shall ensure that sediment control measures as required by Discharge Permit RM14.026.03 are in place during construction and that all practical steps are taken to prevent contamination of natural runoff by sediments during construction.
  - (c) During construction the consent holder shall minimise discoloration and siltation of Lake Wakatipu/Whakatipu-wai-maori and Marina Creek and shall ensure that no contaminants, including fuel, oil, cement or cement products, enter water. In the event of contamination, the consent holder shall instigate remedial action and shall notify the Consent Authority as soon as practical.
  - (d) All machinery shall be water blasted off-site prior to being used, to reduce the potential for importation of noxious weed plants and seeds. Machinery shall be maintained at all times to prevent leakage of fuel or oil into water.
  - (e) Vehicles and machinery shall, as far as practicable, operate outside of water. If machinery needs to enter water it is to be for the minimum amount of time required to complete the works. No refueling or storage of plant or materials shall occur within the lake;
  - (f) The pouring of concrete shall not be undertaken in or within 20 metres of water;
  - (g) Any disturbed areas of lake or river bank or sections of bank that have been cut to allow access for machinery, shall be reinstated to the previous natural profile;
  - (h) Any equipment used for wet concrete shall not be washed out within Lake Wakatipu and Marina Creek or any adjacent area where runoff could enter a waterbody.
  - (i) At the completion of the works authorised by this consent, the consent holder shall ensure that all plant, equipment, chemicals, fencing, signage, debris, rubbish and any other material brought on site is removed from the site. The site shall be tidied to a degree at least equivalent to that prior to the works commencing.

14. If the consent holder:
- (a) Discovers koiwi tangata (human skeletal remains), or Maori artefact material, the Permit Holder shall without delay:
    - (i) Notify the Consent Authority, Tangata whenua Heritage New Zealand Pouhere Taonga and in the case of skeletal remains, the New Zealand Police.
    - (ii) Stop work within the immediate vicinity of the discovery to allow a site inspection by the Heritage New Zealand Pouhere Taonga and the appropriate runanga and their advisors, who shall determine whether the discovery is likely to be extensive; if a thorough site investigation is required and whether an Archaeological Authority is required.
    - (iii) Any koiwi tangata discovered shall be handled and removed by tribal elders responsible for the tikanga (custom) appropriate to its removal or preservation. Site work shall recommence following consultation with the Consent Authority, the Heritage New Zealand Pouhere Taonga, Tangata whenua, and in the case of skeletal remains, the NZ Police, provided that any relevant statutory permissions have been obtained.
  - (b) Discovers any feature or archaeological material that predates 1900, or heritage material, or disturbs a previously unidentified archaeological or heritage site, the Permit Holder shall without delay:
    - (i) Stop work within the immediate vicinity of the discovery or disturbance; and
    - (ii) Advise the Heritage New Zealand Pouhere Taonga, and in the case of Maori features or materials, the Tangata whenua, and if required, shall make an application for an Archaeological Authority pursuant to the Heritage New Zealand Pouhere Taonga Act 2014; and
    - (iii) Arrange for a suitably qualified archaeologist to undertake a survey of the site.Site work shall recommence following consultation with the Consent Authority.

## **Review**

15. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent within 3 months of each anniversary of the commencement of this consent for the purpose of: The Consent Authority may in accordance with Sections 128 and 129 of the Resource Management Act 1991 serve notice on the consent holder of its intention to review the conditions of this consent within three months of each anniversary of the date of this consent for the following purposes:
- (a) To deal with any adverse effects on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage, or which become evident after the date of commencement of the consent, or
  - (b) To adopt the best practicable option to remove or reduce any adverse effect on the environment, or
  - (c) Ensuring the conditions of this consent are consistent with any National Environmental Standards.

## **Notes to Consent Holder**

1. *The consent holder shall also comply with all notices and guidelines issued by Biosecurity New Zealand, in relations to avoiding spreading the pest organism *Didymosphenia geminata* known as “Didymo” (refer to [www.biosecurity.govt.nz/didymo](http://www.biosecurity.govt.nz/didymo)).*



2. *During the exercise of this consent, the consent holder should ensure that fuel storage tanks and machinery working and stored in the construction area shall be maintained at all times to prevent leakage of oil and other contaminants into the watercourse name. No refueling of machinery shall occur within the watercourse. In the event of contamination, the consent holder shall undertake remedial action and notify the Consent Authority within 5 working days.*
3. *The consent holder shall ensure that any contractors engaged to undertake work authorised by this consent abide by the conditions of this consent. A copy of this consent should be present on site at all times while the work is being undertaken*
4. *The removal of pest plants is permitted providing the requirements of Rules 13.5.1.5 and 13.7.1.1 of the Regional Plan: Water for Otago can be met.*

## **WATER PERMIT**

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Lakes Marina Projects Limited  
Address: C/- The Business Advisory Group Limited, Level 13, 34 Shortland Street, Auckland

To permanently divert the flow of Marina Creek into a pipe  
for the purpose of constructing a marina

For a term expiring 1 December 2029

Location of consent activity: An unnamed tributary of Lake Wakatipu/Whakatipu-wai-maori locally known as Marina Creek, approximately 190 metres south west of the intersection of Sugar Lane and Frankton Road (State Highway 6A), Frankton, Queenstown

Legal description of consent location: Sec 48 and 52 Blk XXI Shotover SD

Mid-Point Map  
Reference: NZTM 2000 E1262425 N5006038

### **Conditions**

#### **Specific**

1. The diversion shall:
  - (a) Be undertaken as described in the application for consent lodged with the Consent Authority on 4 February 2014 and further information submitted on 13 May 2014, 1 July 2014 and 10 November 2014; and
  - (b) Be as outlined in the plans outlined in Appendix 1 attached to this consent.
  - (c) Only occur in conjunction with Land Use Consent RM14.026.01If there are any inconsistencies between the application and this consent, the conditions of this consent shall prevail.
  
2. The diversion of water from Marina Creek shall only occur once the diversion channel has been fully excavated.

- 
3. When diverting water into the pipe, all reasonable steps shall be taken to ensure that sediment and discolouration of water are kept to a minimum.

### **Performance Monitoring**

4. The consent holder shall provide electronic colour photographs, no smaller than 200 x 150 millimetres of the diversion authorized by this consent, to the Consent Authority as soon as practicable. At a minimum, the photographs should show:
  - (a) Before the diversion occurs;
  - (b) Immediately after the completion of diversion and rehabilitation of the site;
  - (c) The discharge site to Lake Wakatipu/Whakatipu-wai-maori.

### **General**

5. The consent holder shall ensure the diversion does not cause any flooding, erosion, scouring, land instability or damage of any other person's property.
6. There shall be no reduction in the surface flow of the Marina Creek as a result of the diversion.

### **Review**

7. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent within three months of each anniversary of the commencement of this consent for the purposes of:
  - (a) Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which is appropriate to deal with at a later stage; or
  - (b) Ensuring the conditions of this consent are appropriate; or
  - (c) Ensuring that the conditions of this consent are consistent with any National Environmental Standards

### **Notes to Consent Holder**

1. *The consent holder shall ensure that any contractors engaged to undertake work authorised by this consent abide by the conditions of this consent. A copy of this consent shall be present on site at all times while the work is being undertaken.*

## **DISCHARGE PERMIT**

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Lakes Marina Projects Limited  
Address: C/- The Business Advisory Group Limited, Level 13, 34 Shortland Street, Auckland

To discharge sediment to water for the purpose of constructing a marina

For a term expiring 1 December 2029

Location of consent activity: Lake Wakatipu/Whakatipu-wai-maori and an unnamed tributary of Lake Wakatipu/Whakatipu-wai-maori locally known as Marina Creek, approximately 130 metres south west of the intersection of Sugar Lane and Frankton Road (State Highway 6A), Frankton, Queenstown

Legal description of consent location: Crown Land Lake Bed, Secs 48, 52 and 53 Blk XXI Shotover SD, Pt Sec 39 Blk XXI Shotover SD, Sec 1 SO 21582, Sec 1 SO 24208

Mid-Point Map  
Reference: NZTM 2000 E1262504 N5006069

### **Conditions**

#### **Specific**

1. The discharge shall:
  - (a) Be undertaken as described in the application for consent lodged with the Consent Authority on 4 February 2014 and further information submitted on 13 May 2014, 1 July 2014 and 10 November 2014; and
  - (b) Be as outlined in the plans outlined in Appendix 1 attached to this consent.
  - (c) Only occur in conjunction with Land Use Consent RM14.026.01If there are any inconsistencies between the application and this consent, the conditions of this consent shall prevail.
  
2. No contaminants other than silt and sediment shall be discharged into Lake Wakatipu/Whakatipu-wai-maori and Marina Creek.

3. The consent holder shall take all practicable steps to minimise the release of sediment into the water while disturbing the bed of Lake Wakatipu/Whakatipu-wai-maori and Marina Creek.

### **Performance Monitoring**

4. Prior to discharging sediment to water, the consent holder shall submit to the Consent Authority a sediment management plan. The plan shall cover the areas of works authorised by Land Use Consent RM14.026.01, (and any subsequent variations). The sediment management plan shall include, but not be limited to:
  - (a) An outline of methods used, such as the use of hay bales, silt fences, sediment ponds, bunds or similar methods to mitigate sediment discharges;
  - (b) Procedures to ensure methods identified in (a) above are maintained at all times;
  - (c) Procedures for the entry and exit for vehicles to and from the wet bed of the lake and how this is to be managed .
  - (d) Methods to actively monitor the discharge of sediment and sediment mitigation measures identified in (a) above.
  - (e) Procedures in place to notify the Council, should any issues be identified which may lead to noncompliance;
  - (f) The names of contractors operating under this consent and their contact details;
  - (g) Methods to record and address any complaints; and
  - (h) A daily work template of methods used to mitigate sediment discharges.The discharge shall be undertaken in accordance with the sediment management plan.
5. The consent holder shall provide electronic colour photographs, no smaller than 200 x 150 millimetres of the sediment mitigation measure(s) implemented in accordance with Condition 5, to the Consent Authority as soon as practicable. At a minimum, the photographs should show:
  - (a) The chosen sediment mitigation measure(s) in place prior to the discharge authorised by this consent;
  - (b) The chosen sediment mitigation measure(s) in operation during all the associated works with this consent;
  - (c) Any changes in sediment mitigation measure(s) in operation during all the associated works with this consent; and
  - (d) Following the completion of works, until the discharge authorised by this consent no longer occurs.
6. The consent holder shall notify the Consent Authority as soon as practicable, but not less than five working days prior to the commencement of the discharge authorised by this consent.

### **General**

7. No lawful take of water is to be adversely affected as a result of any discharge.

8. The discharge shall not give rise to all or any of the following effects in the receiving water:
  - (a) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
  - (b) Any emission of objectionable odour; or
  - (c) Any significant adverse effects on aquatic life.
  
9. One hour after the cessation of the works each day, there shall not be a conspicuous change in the colour or visual clarity in the receiving waters of Lake Wakatipu/Whakatipu-wai-maori or Marina Creek, 50 metres from the discharge source.

#### **Review**

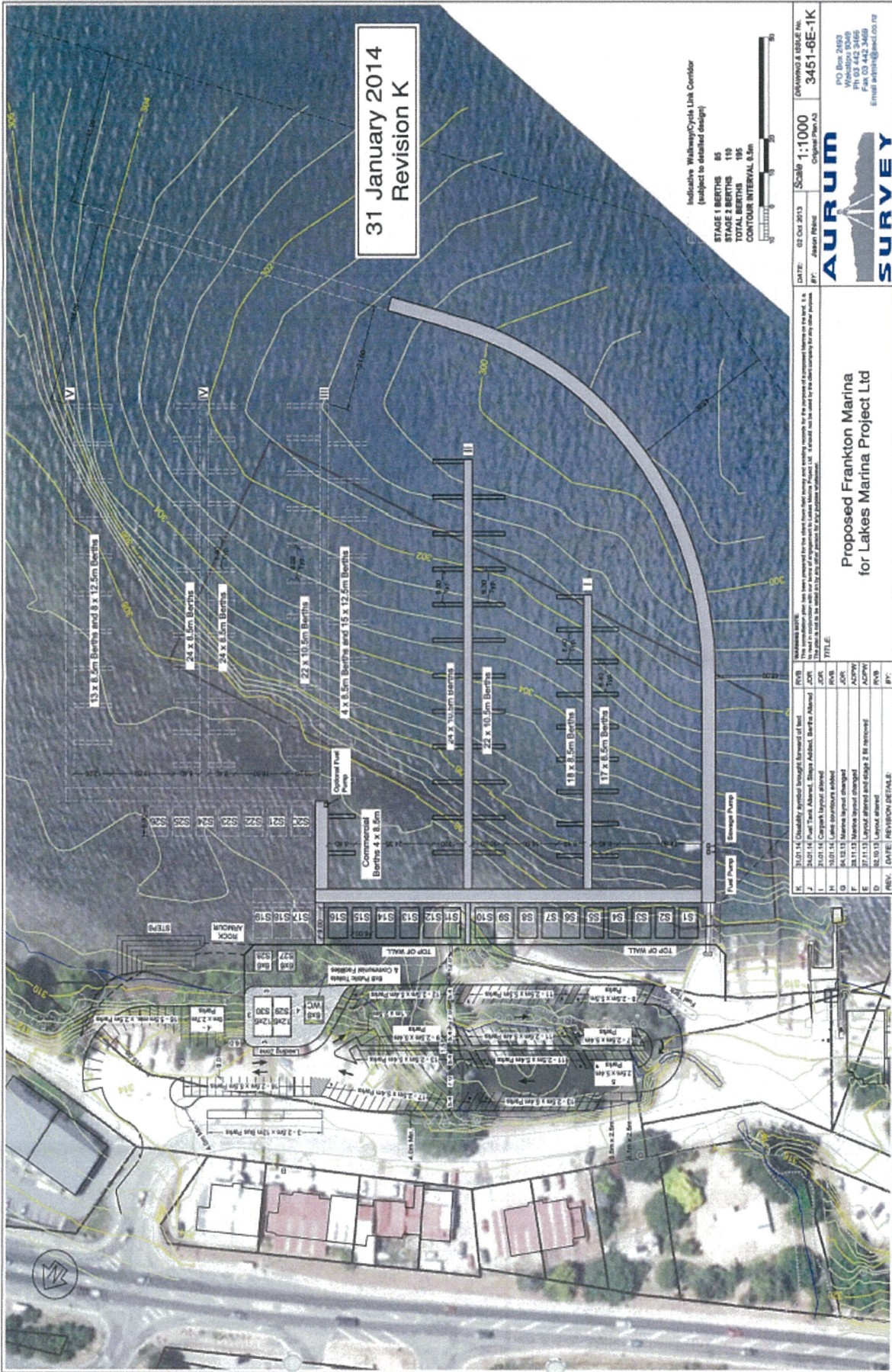
10. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent within three months of each anniversary of the commencement of this consent for the purposes of:
  - (a) Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which is appropriate to deal with at a later stage; or
  - (b) Ensuring the conditions of this consent are appropriate; or
  - (c) Ensuring that the conditions of this consent are consistent with any National Environmental Standards

#### **Notes to Consent Holder**

1. *The consent holder shall ensure that any contractors engaged to undertake work authorised by this consent abide by the conditions of this consent. A copy of this consent shall be present on site at all times while the work is being undertaken.*



**Appendix 1 to Resource Consents RM14.026.01-03**



31 January 2014  
Revision K

Indicative Walkway/Cycle Link Corridor  
(subject to detailed design)

STAGE 1 BERTHS 85  
STAGE 2 BERTHS 119  
TOTAL BERTHS 195  
CONTOUR INTERVAL 5.0m



DATE: 02 Oct 2013 SCALE: 1:1000  
BY: Aileen Phelan ORIGINAL FILE: 3451-6E-1K

**AURUM SURVEY**

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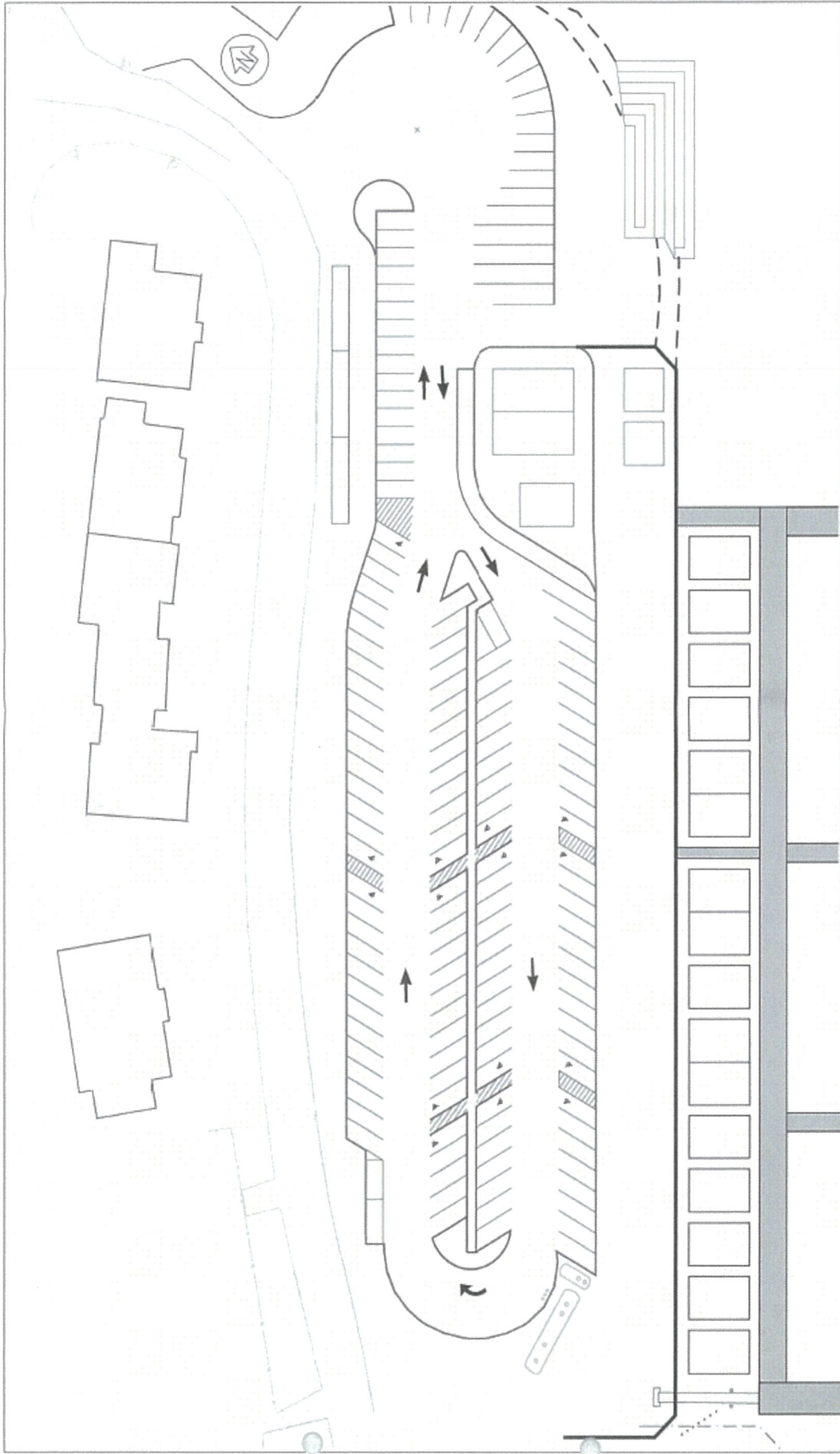
PROPOSED FRANKTON MARINA  
FOR LAKES MARINA PROJECT LTD

REVISIONS:

NO.	DATE	REVISION DETAILS	BY:
1	02/10/13	Final	APW
2	02/10/13	Final	APW
3	02/10/13	Final	APW
4	02/10/13	Final	APW
5	02/10/13	Final	APW
6	02/10/13	Final	APW
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100	02/10/13	Final	APW

ST 1, ST 2, ST 3, ST 4, ST 5, ST 6, ST 7, ST 8, ST 9, ST 10, ST 11, ST 12, ST 13, ST 14, ST 15, ST 16, ST 17, ST 18, ST 19, ST 20, ST 21, ST 22, ST 23, ST 24, ST 25, ST 26, ST 27, ST 28, ST 29, ST 30, ST 31, ST 32, ST 33, ST 34, ST 35, ST 36, ST 37, ST 38, ST 39, ST 40, ST 41, ST 42, ST 43, ST 44, ST 45, ST 46, ST 47, ST 48, ST 49, ST 50, ST 51, ST 52, ST 53, ST 54, ST 55, ST 56, ST 57, ST 58, ST 59, ST 60, ST 61, ST 62, ST 63, ST 64, ST 65, ST 66, ST 67, ST 68, ST 69, ST 70, ST 71, ST 72, ST 73, ST 74, ST 75, ST 76, ST 77, ST 78, ST 79, ST 80, ST 81, ST 82, ST 83, ST 84, ST 85, ST 86, ST 87, ST 88, ST 89, ST 90, ST 91, ST 92, ST 93, ST 94, ST 95, ST 96, ST 97, ST 98, ST 99, ST 100.





DATE: 02 Oct 2013 Scale: 1:500  
 BY: Jason Ridd Original Plan No: 3451-6E-3E

**AURUM SURVEY**

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 Wainuiomata  
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**Proposed Frankton Marina  
 for Lakes Marina Project Ltd**

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REV.	DATE	REVISION/DETAILS	BY:
E	24.07.13	Final Track Allowed, Slope Added	JCR
D	21.07.13	Layout altered	JCR
C	16.07.13	Layout altered	JCR
B	02.07.13	Layout altered	RVB
A	23.06.13	Initial Issue	JCR





B	Marina Office Building	1:500	2023/11/14
C	Marina Clubhouse	1:500	2023/11/14
D	Marina Restaurant	1:500	2023/11/14
E	Marina Bar	1:500	2023/11/14
F	Marina Shop	1:500	2023/11/14
G	Marina Boat Lift	1:500	2023/11/14
H	Marina Fuel Station	1:500	2023/11/14
I	Marina Waste Disposal	1:500	2023/11/14
J	Marina Sewerage Treatment Plant	1:500	2023/11/14
K	Marina Stormwater Management	1:500	2023/11/14
L	Marina Access Road	1:500	2023/11/14
M	Marina Parking Area	1:500	2023/11/14
N	Marina Security Fence	1:500	2023/11/14
O	Marina Security Gate	1:500	2023/11/14
P	Marina Security Light	1:500	2023/11/14
Q	Marina Security Camera	1:500	2023/11/14
R	Marina Security Alarm	1:500	2023/11/14
S	Marina Security System	1:500	2023/11/14
T	Marina Security Protocol	1:500	2023/11/14
U	Marina Security Training	1:500	2023/11/14
V	Marina Security Drills	1:500	2023/11/14
W	Marina Security Exercises	1:500	2023/11/14
X	Marina Security Inspections	1:500	2023/11/14
Y	Marina Security Audits	1:500	2023/11/14
Z	Marina Security Reviews	1:500	2023/11/14
AA	Marina Security Updates	1:500	2023/11/14
AB	Marina Security Changes	1:500	2023/11/14
AC	Marina Security Enhancements	1:500	2023/11/14
AD	Marina Security Improvements	1:500	2023/11/14
AE	Marina Security Innovations	1:500	2023/11/14
AF	Marina Security Research	1:500	2023/11/14
AG	Marina Security Development	1:500	2023/11/14
AH	Marina Security Testing	1:500	2023/11/14
AI	Marina Security Evaluation	1:500	2023/11/14
AJ	Marina Security Assessment	1:500	2023/11/14
AK	Marina Security Analysis	1:500	2023/11/14
AL	Marina Security Investigation	1:500	2023/11/14
AM	Marina Security Inquiry	1:500	2023/11/14
AN	Marina Security Question	1:500	2023/11/14
AO	Marina Security Concern	1:500	2023/11/14
AP	Marina Security Issue	1:500	2023/11/14
AQ	Marina Security Problem	1:500	2023/11/14
AR	Marina Security Challenge	1:500	2023/11/14
AS	Marina Security Obstacle	1:500	2023/11/14
AT	Marina Security Barrier	1:500	2023/11/14
AU	Marina Security Hurdle	1:500	2023/11/14
AV	Marina Security Impediment	1:500	2023/11/14
AW	Marina Security Obstruction	1:500	2023/11/14
AX	Marina Security Blockade	1:500	2023/11/14

LAKES MARINA  
PROJECTS LTD

PROPOSED  
FRANKTON  
MARINA

MARINA GENERAL  
ARRANGEMENT PLAN

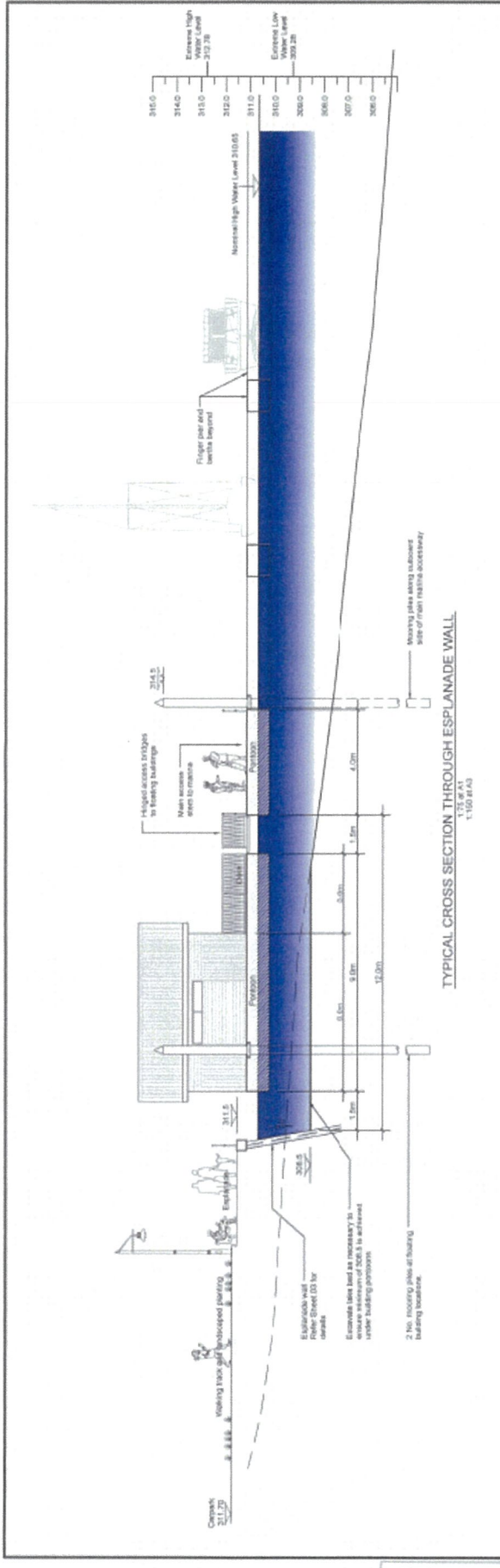
**emtech**  
Engineering & Marine Consultants  
PO Box 881, Dunedin 9054 - 03 477 2888 - www.emtech.co.nz

Project: 13039  
Sheet: 01  
Revision: E

MARINA GENERAL ARRANGEMENT PLAN  
1:500, A1  
1:1000, A3

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TYPICAL CROSS SECTION THROUGH ESPLANADE WALL  
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 1:150 R/A 3

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D	Building footprint	Sheet 13039/01
A	Building details	Sheet 13039/03
B	Building details	Sheet 13039/04
E	Building details	Sheet 13039/05
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O	Building details	Sheet 13039/15
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R	Building details	Sheet 13039/18
S	Building details	Sheet 13039/19
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U	Building details	Sheet 13039/21
V	Building details	Sheet 13039/22
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X	Building details	Sheet 13039/24
Y	Building details	Sheet 13039/25
Z	Building details	Sheet 13039/26
AA	Building details	Sheet 13039/27
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AD	Building details	Sheet 13039/30
AE	Building details	Sheet 13039/31
AF	Building details	Sheet 13039/32
AG	Building details	Sheet 13039/33
AH	Building details	Sheet 13039/34
AI	Building details	Sheet 13039/35
AJ	Building details	Sheet 13039/36
AK	Building details	Sheet 13039/37
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CQ	Building details	Sheet 13039/95
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CV	Building details	Sheet 13039/100

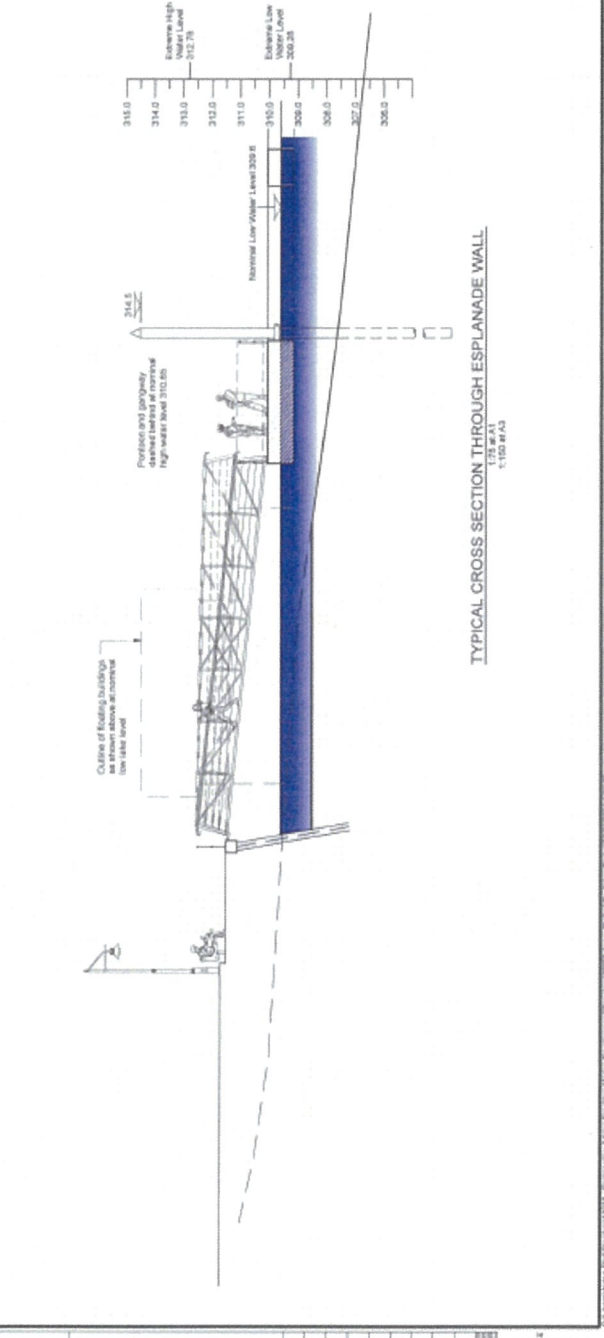
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 FRANKTON  
 MARINA

TYPICAL SECTION

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Project	13039	Sheet	02	Revision	C
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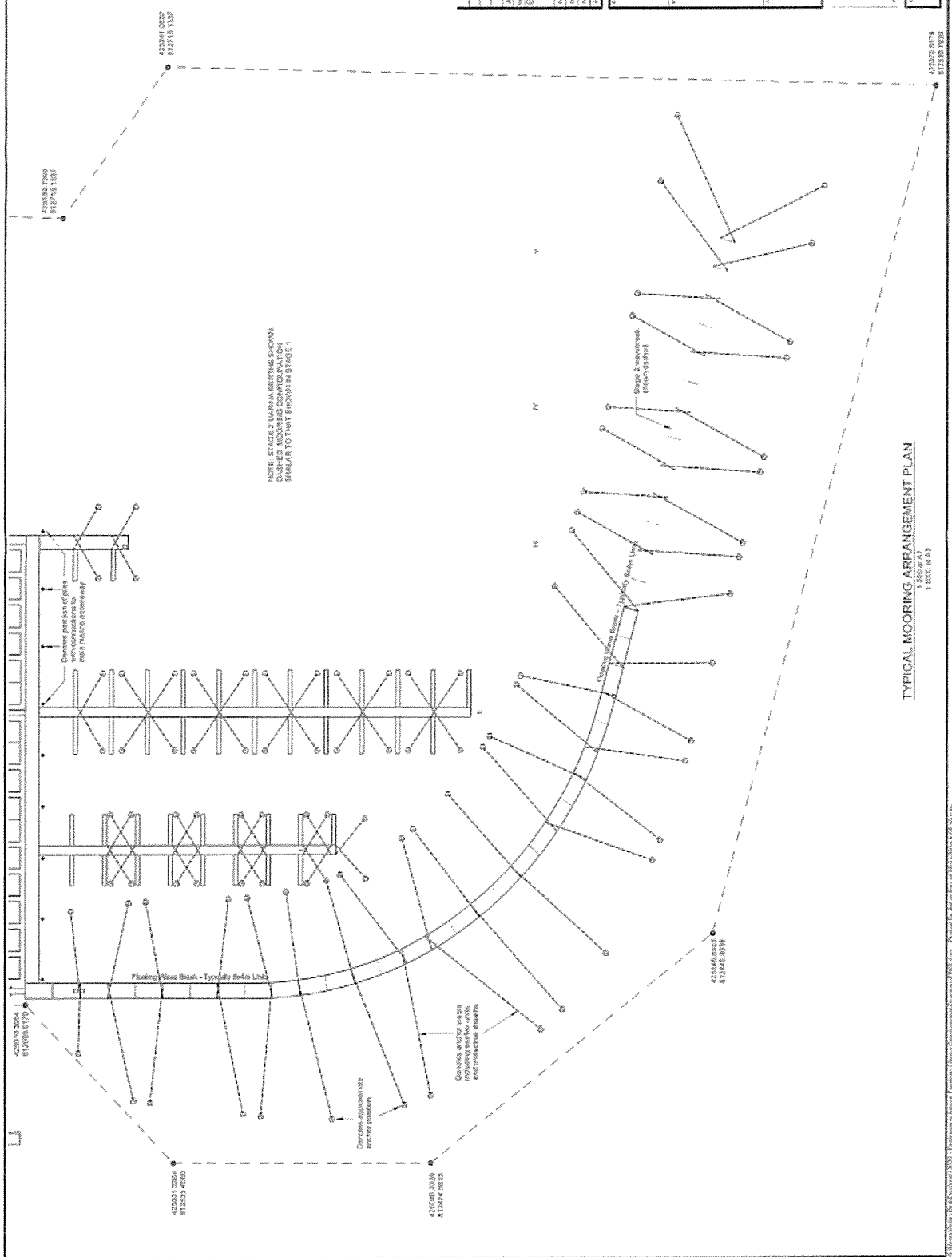
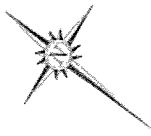


TYPICAL CROSS SECTION THROUGH ESPLANADE WALL  
 1:35 R/A 1  
 1:150 R/A 3

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Rev	Description	Date
1	Issue for tender	13/07/14
2	Issue for tender	13/07/14
3	Issue for tender	13/07/14
4	Issue for tender	13/07/14
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99	Issue for tender	13/07/14
100	Issue for tender	13/07/14

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**PROPOSED FRANKTON MARINA**

**MARINA MOORING PLAN**

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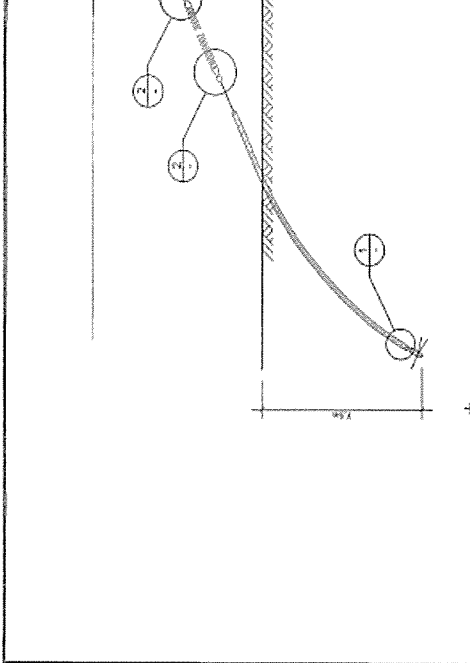
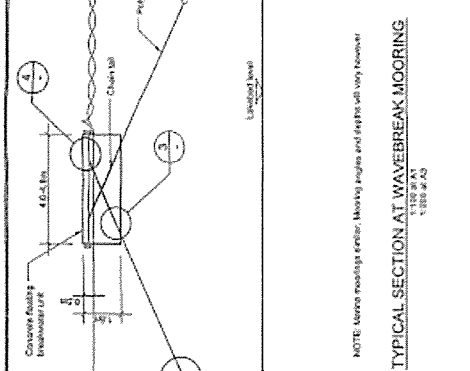
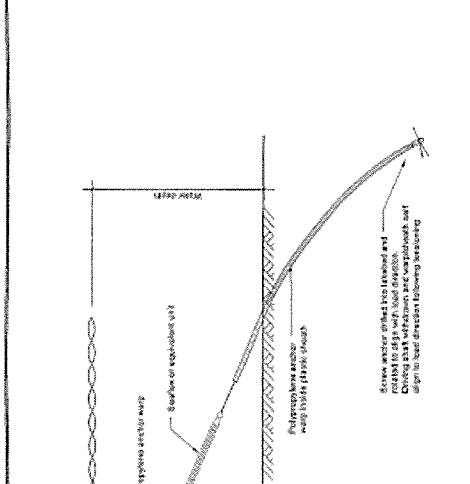
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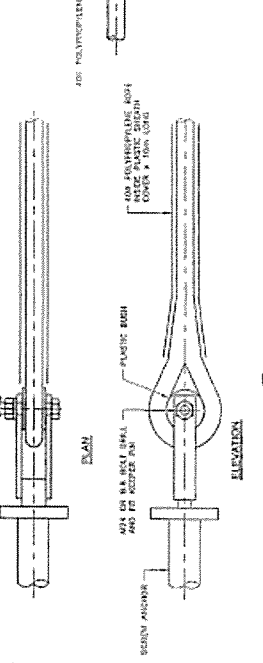
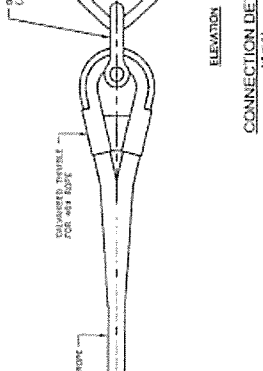
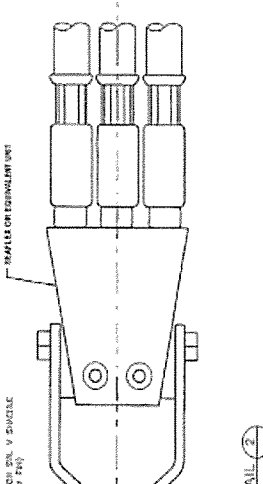
**TYPICAL MOORING ARRANGEMENT PLAN**  
1:1000 (A2)

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No.	Revisions	Date	By	Check
1	Initial Issue	July 13	AS	AS
2	Revised	July 13	AS	AS
3	Revised	July 13	AS	AS
4	Revised	July 13	AS	AS
5	Revised	July 13	AS	AS
6	Revised	July 13	AS	AS
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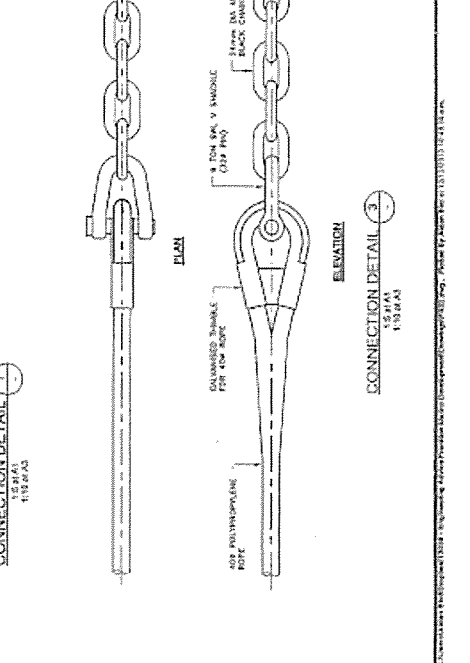
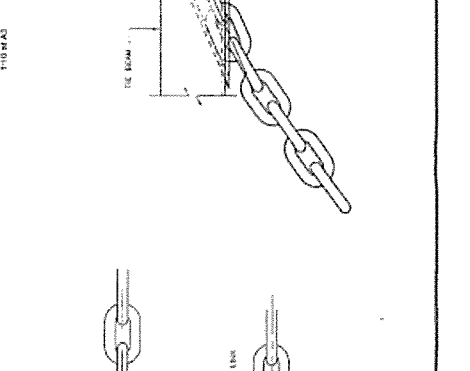
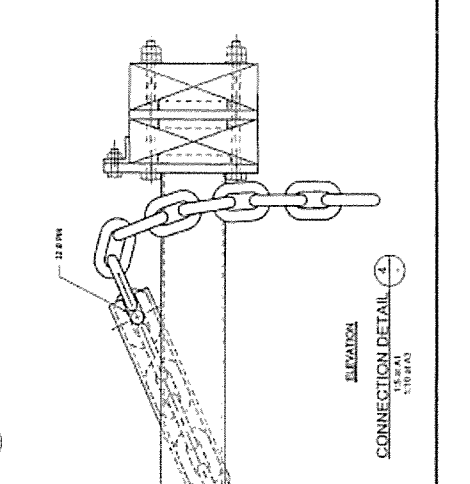
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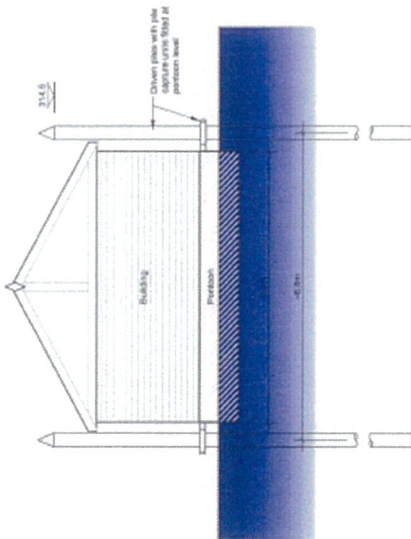
**PROPOSED FRANKTON MARINA**

**TYPICAL MOORING SECTION AND DETAILS**

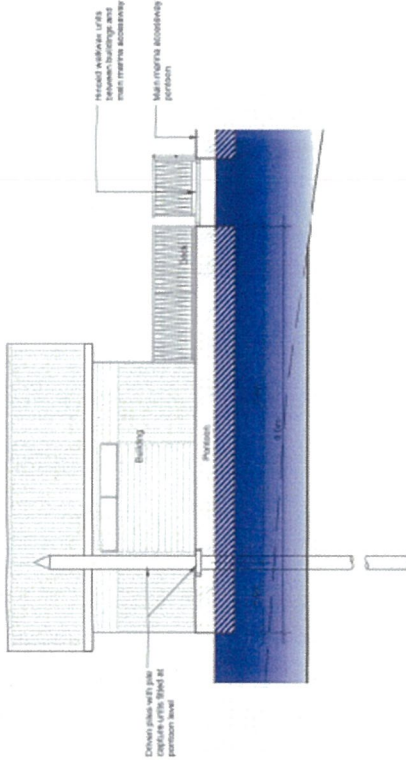
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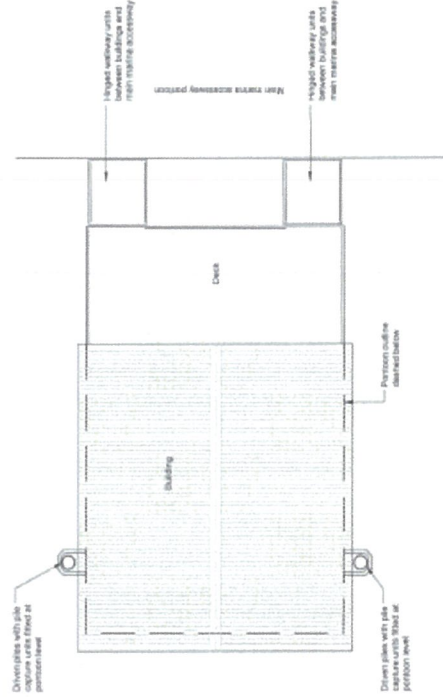
TYPICAL BUILDING END ELEVATION WITH MOORING PILES.  
1:50 @ A1  
1:100 @ A3



TYPICAL BUILDING SIDE ELEVATION WITH MOORING PILES.  
1:50 @ A1  
1:100 @ A3



TYPICAL BUILDING PILE CONNECTION  
1:50 @ A1  
1:100 @ A3



TYPICAL PLAN OF BUILDING MOORING PILES.  
1:50 @ A1  
1:100 @ A3

No.	Description	Rev.	Date
1	Issue for construction	1	17/07/13
2	Issue for construction	2	17/07/13
3	Issue for construction	3	17/07/13
4	Issue for construction	4	17/07/13
5	Issue for construction	5	17/07/13
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7	Issue for construction	7	17/07/13
8	Issue for construction	8	17/07/13
9	Issue for construction	9	17/07/13
10	Issue for construction	10	17/07/13

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**TYPICAL BUILDING MOORING PILE ELEVATION AND DETAILS**

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