

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of an Application by **CONTACT ENERGY LTD**

(RC 210320)

**DECISION OF COMMISSIONER ROBERT NIXON APPOINTED BY CENTRAL
OTAGO DISTRICT COUNCIL**

The Hearing and Appearances

Hearing Date:

Friday, 18 February 2022

Appearances for the Applicant:

Mr Trevor Robinson, Legal Counsel

Mr Matthew Curran, Senior Planner,
Landpro

Mr Boyd Brinsdon, Head of Hydro
Generation, Contact Energy

Mr Benjamin Espie, Landscape
Architect, Vivian and Espie Ltd

Ms Elizabeth Paxton, Acoustic
Consultant, Marshall Day Acoustics

Appearances for the Central Otago District Council:

Mr Adam Vincent, Planning Officer

No submitters participated in the hearing.

Abbreviations

The following abbreviations are used in this decision:

Contact Energy Ltd	“the Applicant”
Central Otago District Council	“the Council”
The Operative Central Otago District Plan	“the ODP”
The Resource Management Act 1991	“RMA”
The land subject to this application	“the site”.

THE PROPOSAL

1. This application is to undertake a two – lot subdivision and seek land use consent for the construction of a datacentre and associated facilities at 46 Fruitgrowers Road near Clyde. The site is legally described as Lot 1 DP 25146. Fruitgrowers Road is located on the southern bank of the river and on the opposite side of the river to Clyde Township. Fruitgrowers Road extends past the site and the Clyde Dam to a Rowing Club, and beyond that provides access to the recently opened Lake Dunstan Trail.

2. The application site is located on a predominantly open grassed flat adjacent to Fruitgrowers Road and occupies an area of approximately 0.65 ha located below the Clyde Dam on the true right of the Clutha River/Mata Au. At its closest point, Clyde Township is approximately 230m to the south-east across the Clutha River/Mata Au.
3. The proposal is succinctly described in the evidence of Mr Curran¹ as follows:
 - (a) construction of eight containerised data centres and associated facilities;
 - (b) construction of a noise mitigation wall along the eastern and southern boundaries of the application site;
 - (c) subdivision of Lot 1 DP 25146 to allow a substation to be located on proposed Lot 1;
 - (d) vehicle access off Fruitgrowers Road via the applicant's private road;
 - (e) soil disturbance on land classified on the Hazardous Activities and Industries List (HAIL) as "Waste Disposal to Land" (HAIL code G5);
 - (f) provision for vehicle parking, loading, and manoeuvring; and
 - (g) landscaping and planting around the perimeter of the site.
4. Proposed Lot 1 containing the substation will be 0.26 ha in area. Proposed Lot 2, which includes the Clyde Dam, the Rowing Club and part of Lake Dunstan and the Clutha River/Mata Au, will be 111.49 ha in area. A plan of the site is attached to this decision.
5. At the time the application was lodged, a Notice of Requirement (NOR) was issued by Aurora Energy Ltd. This NOR covers the area comprising proposed Lot 1 of the subdivision and is to provide for a substation. I understand that there were no submissions made on the NOR. A recommendation from the Central Otago District Council was subsequently issued under section 171(2) of the RMA to the Requiring Authority (Aurora Energy) on 21 December 2021. I understand the NOR has been accepted and Aurora is preparing an Outline Plan under section 176A RMA.
6. The Aurora energy substation alongside the proposed datacentre is intended to provide it with a direct connection to the local distribution network and to also provide a new connection for Clyde Township from 2025.
7. The application site occupies an area between two unnamed sealed roads which branch off Fruitgrowers Road, one of which provides access to the Clyde Dam, and the other to the bank of the river. Both are private roads but accessible to the public. Lot 2 will maintain its existing access arrangements, whereas proposed Lot 1 will be accessed via a right-of-way that follows the existing access road.
8. The datacentre will be operated by a separate entity 'Lake Parime' under a lease agreement with the applicant. 'Lake Parime', is a privately owned UK-based digital infrastructure company that designs, builds, and operates high performance computing systems connected to renewable energy sources².

¹ Evidence M Curran, paragraph 3.5

² Evidence B. Brinsdon, paragraphs 7 and 8

9. No staff would be permanently based on the site. The lessee will employ a small number of specialised maintenance staff to manage the servers within the datacentre³.
10. As originally notified, the datacentre comprised eight containers (with a galvanised steel exterior) located in pairs, with each container holding 368 servers to be cooled by ventilation louvres along the sides of each container. The datacentre site would occupy an area of 1472m² within a 1.8m high mesh security fence. Each container was proposed to be 3.2m in height and cover an area of 37m². The site would have also contained a small operations building of 2m in height and 6m² in area. The containers, the operations building and the security fence would be painted in a single colour from a natural range of browns, greens or greys with a reflectivity value of less than 36%.
11. A 3.5m high noise mitigation fence is proposed along the eastern and southern boundaries of the application site constructed of Exterior Acoustic Panels made of galvanised steel.
12. Five marked carparks are proposed to service the datacentre and substation, with the manoeuvring space of approximately 980m² in area which could accommodate additional parking if required. A landscaping plan for the site accompanied the evidence of Mr Espie.
13. As is common practice, a Construction Management Plan (CMP) would be submitted to the Council prior to works commencing in order to manage the effects of construction activities.
14. The Clutha River/Mata-Au is a Statutory Acknowledgement Area, identified under Schedule 40 of the Ngai Tahu Claims Act.
15. The application site is located on land which was historically excavated and used during the 1980s as a construction yard for the Clyde Dam project. Approximately 1.0 – 2.5 m of fill was placed across the site, apparently including demolition materials.

Amendments to the application

16. Subsequent to the notification of the application, a number of amendments were made to the site plan as described in the evidence of Mr Curran;
 - (a) the width of each datacentre container is proposed to increase by 1.2m (600mm on each side) to provide for the installation of noise attenuators;
 - (b) the original internal access to the datacentre has shifted slightly to the north and a second access has been included between the two southernmost containers;
 - (c) the operations building is proposed to increase in area from 6m² to 9m² and has been moved from the north-west corner of the site to be located approximately in the middle of the site;
 - (d) the configuration of the electrical equipment for each datacentre has been altered to identify the location of the transformers between the containers.
17. I consider that these physical amendments are sufficiently minor in scale that they do not fall outside the scope of the application as notified, and no concerns were raised in this respect by the Council.

³ Ibid, paragraph 21

18. I undertook a site visit on Sunday 23, 2022. The hearing was closed on Wednesday 9 March 2022 following receipt of the applicant's closing submissions and responses from the applicant and the Council on conditions.

NOTIFICATION AND SUBMISSIONS

19. The application was limited notified on 26 October 2021, with submissions closing on 23 November 2021. Three submissions in opposition to the application were received as set out below, including a summary of the matters raised in each submission.

- **Nicolas Robert Johnston and Bridget Lloyd-Johnston** – concerned about the creation of 'white noise', requested a noise level restriction of 50dB_{L_{Aeq}} between 0700 and 2100 hours Monday to Saturday; on Sunday from 0900 to 1800 hours; and 40dB_{L_{Aeq}} at all other times;
- **Wendy and John Muir** – concerned about the possible character of noise generated, and that the surrounding terrain including the Clyde Dam could act as a natural amphitheatre that amplified noise;
- **Lawrence Wilkes and Claire Wilkes** – concerned that proposed activity does not comply with Council noise standards; concerns about the accuracy of noise level calculations; development out of character with Clyde Township and the tourist/historic focus of the town; questioned claimed benefits to the township; site chosen for cheap electricity; consultation misleading.

20. The application was also notified to Te Ao Marama. Aukaha responded on their behalf, with the applicants providing a copy of the written approval of Te Ao Marama to the application to the Council on 14 January 2021⁴.

21. The applicant's AEE notes that consultation was undertaken with 16 owners/occupiers as listed in Table 9 of the AEE. This included 3 in Miners Lane, 8 at the western end of Sunderland Street, and 5 in Fruitgrowers Road.

STATUTORY MATTERS

22. The application site is located within the 'Water Surface and Margin Resource Area' (WSMRA) under the ODP.

23. Resource consent is required with respect to the following rules:

A **discretionary activity** resource consent pursuant to Rule 5.7.3(b) for subdivision within the WSMRA.

⁴ S 42 a report, paragraph 4.4

A **discretionary activity** resource consent pursuant to Rule 5.7.4A for a building not provided for under the list of permitted structures in the WSMRA.

A **restricted discretionary activity** resource consent pursuant to Rule 12.7.2(i) as 22 carparks are required based on the gross floor area of the datacentre, whereas only 5 are proposed.

24. Overall, the application is to be assessed as a **discretionary activity**.
25. At this point I note that information from the applicant (as updated by Ms Paxton) is that the proposed activity complies with the noise standards specified under Rule 4.7.6E (Standard 5.7.4 C). This is discussed more detail later in this decision.
26. I note the applicant's AEE made reference to non-compliance with Standards 12.7.4(i) and 12.7.4 (ii)⁵. It stated that:

"A technical non-compliance exists with Standard 12.7.4 (i) and (ii) due to the CODP referencing outdated standards. It is noted that noise has been assessed in accordance with current best practice".
27. The AEE indicated that this would result in the application being restricted discretionary in terms of this particular rule. This was also highlighted in the submission of Lawrence and Claire Wilkes.
28. In his S42A report, Mr Vincent stated that these provisions related to measuring noise and restrictions on construction noise in urban areas. He said the site was not in an urban area as defined in the District Plan⁶. He said that Rule 12.7.4(i) was an advisory standard for how noise is to be measured, not a 'standard' that can be breached.
29. Ms Paxton, the applicant's Acoustic Consultant, stated that Rule 12.7.4(i) relates to the methodology for measuring and assessing noise levels. She made reference to the 1991 versions of NZS 6801 and NZS 6802, which she said had now been superseded by the 2008 version of the standards. She said for a 'time constant' noise like the datacentre servers, the difference compared to the updated standards was expected to be within 1dB, so that there was no material difference between the two standards. She added that Chapter 15 of the November 2019 National Planning Standards requires that district plans adopt the 2008 versions of NZS6801 and 6802. Both Ms Paxton and Mr Vincent were in agreement that the methods under Rule 12.7.4 were outdated standards. The conclusion was that no consent was required under the 'rule'.
30. Given the contents of the AEE, I consider it was understandable that the Wilkes submission drew attention to what was identified as a non-compliance. However, based on the evidence of Ms Paxton, and the explanation of Mr Vincent that the standard is not in fact a 'rule' for determining activity status, I am satisfied that consent is not required in terms of Rules 12.7.4 (i) and (ii).

⁵ Applicant's AEE, page 20

⁶ S42A report; page 18:11 Central Otago District plan

SUBMISSIONS AND EVIDENCE

Legal Submissions

31. **Mr Trevor Robinson** presented legal submissions on behalf of the applicant.
32. Mr Robinson began by noting that consent under the National Environmental Standard for Contaminated Soils (NESCS) had now been granted to Aurora on 11 February covering both the substation site and the datacentre site⁷.
33. He noted that as the datacentre would consume electricity at times when the power station was not operating at full capacity, it would assist in achieving the benefits of the National Policy Statement for Renewable Electricity Generation 2011, a matter of national significance. While he conceded the benefits of the high-technology datacentre to the local community were somewhat speculative, it provides an opportunity that would not otherwise be available.
34. He noted further information made available to Ms Paxton had enabled further refinement of noise modelling which confirmed that noise levels from the site would remain well within the permitted activity standards of the District Plan, even if allowance was made for potential tonal elements. He noted that there was no expert evidence to challenge her findings. He also noted that the evidence of Mr Espie with regards to landscape and visual amenity issues was unchallenged and emphasised the small physical scale of the proposed container 'structures' compared to the nearby Clyde Dam. He submitted that Mr Vincent and Mr Curran had concluded that the proposal was generally consistent with the objectives and policies of the Central Otago District Plan.
35. He noted that there was agreement on appropriate conditions with the exception of the Council's proposed requirements to provide water for firefighting purposes, and the appropriate standard to impose with respect to noise conditions. He said that water was inappropriate to fight a fire in electrical installations and similar provision was not required for electrical installations elsewhere in the district. Referring to case law, he submitted it was inappropriate to have an open-ended condition delegated to Fire and Emergency New Zealand in terms of the firefighting equipment that it might deem suitable⁸.

Applicants Evidence

36. **Mr Boyd Brinsdon** explained the background to the proposal on behalf of Contact Energy. He said that the datacentre would manage demand for electricity to match available electricity generation in real time, to reduce impact on the electricity grid. The reason the site was selected is because it was immediately adjacent to the Clyde power station, a proximity which promotes efficiency as it reduces transmission and distribution losses.

⁷ Legal submissions T Robinson, paragraph 2

⁸ Ibid, paragraphs 28 and 29

37. He said that in 2018 datacentres internationally consumed approximately 1% of globally generated electricity, and this demand was expected to substantially increase in the next decade. New Zealand was attractive for this purpose as it had a high proportion of renewable electricity generation.
38. He explained the operational characteristics of the proposed lessee (Lake Parime), who were entering into a commercial relationship with Contact Energy for the supply of up to 10 MW of electricity. He said the datacentre can operate when electricity demand is low, and scale back its operations and use of electricity when demand is high. Data processing is not part of Contact Energy's core business, but it will continue to hold the resource consents in its own name as applicant to ensure that the datacentre operates within the environmental parameters required by its resource consents. He said that the need for a new substation has led to Contact Energy entering into an agreement with Aurora, the local lines company.
39. He said that the datacentre would be located with existing electricity generation infrastructure in conjunction with the arrangements entered into with Aurora, and would benefit the local community by facilitating the construction of a new substation and effectively subsidising its construction costs. From response to a question, it was clarified that the existing substation serving the area around Clyde was due for replacement within the next few years. He said that he had met with four neighbours who sought additional information about the project but following the issue of a second letter on 27 August 2021, Contact Energy had not received any further communication, or further queries or requests subsequent to notification.

Landscape Evidence

40. **Mr Benjamin Espie** presented evidence on landscape and visual effects on behalf of the applicant. This evidence was important as visual impacts were one of the two main potential issues of concern raised with respect to the proposal.
41. He said the solid noise fence on two of the boundaries would be 3.5 m in height, with a 2.1m mesh security fence surrounding the datacentre and substation, with a standard stock fence surrounding the entire facility. A dense perimeter band of vegetation is proposed to surround the application site in the form of a belt of ribbonwoods with a border of mixed native shrubs in front of them. This planting would be within the perimeter stock fence, supplemented by broken stands of oaks and elms outside the perimeter with pest protection. Immediately to the north of the site is a small public lookout and car parking space surrounded by a mix of exotic amenity trees.
42. A point he repeatedly returned to was that the application site and its surrounds had been very considerably modified. This was initially through historic vegetation clearance for farming activity and later to a much greater extent by activities associated with the construction of the Clyde Dam, roading, water pipelines and large pylons. While the site had a pleasant open space character, it was far removed from its natural state. The proposed buildings were utilitarian in nature, but he was confident that with the maturity of the landscaping proposed built form would be "*...very significantly (or entirely) screened from view*".⁹

⁹ Evidence B.Espie, paragraph 19

43. While the proposed development would add another component of human activity to the currently open character of the application site, this had to be considered in the context and scale of the nearby Clyde Dam. In his opinion there would be a minor adverse effect on the open character of the space along this section of Fruitgrowers Road as a result of its interruption by the new built form and landscaping. He considered that any *natural* character was low. He then went on to assess the visual impact of the site from a range of locations.
44. He said that for users of State Highway 8 above the Clyde Dam to the north, the proposed facility would be difficult to discern, with the dam and associated infrastructure dominating views. Given the breadth of views, the proposed structures would be only noticeable to an observer consciously focusing on the proposed structures, and the development would only have a small cumulative effect in terms of visible built form.
45. He said that as seen from Fruitgrowers Road and the unnamed roads adjacent to the site, the proposed structures would be clearly visible, and would appear large when seen from close quarters. However, the effects of this would be muted by existing and proposed landscape planting and visually experienced in the context of the very large Clyde Dam structure nearby.
46. From the Clyde Recreation Reserve and Miners Lane, which have a presence of existing mature trees, there would be horizontal views towards the application site from along Miners Lane, but with more limited views from the Recreation Reserve. He accepted that the noise fence (and the vegetation in front of it) and part of the substation building would be readily visible from the upper parts of Miners Lane. He stated:

“The proposed activities will be visually obvious additional human elements when seen from the viewpoints of the Miners Lane vicinity that allow views across the river. They will add to the influence of human built elements and decrease the relative importance of natural factors in these views. Again, the context within which these elements sit is an unusual one; considerable human modification has made this area what it is today, large-scale built elements are part of its character and additional utilitarian elements are provided for by the District Plan. However, in these viewpoints that are directly across the river, the existing modifications are somewhat less obvious and the area, backdropped by the mountains, has a more rural and natural aesthetic and the proposed activities will therefore be more discordant. From the particular viewpoints in this vicinity that allow a clear view, such as the upper parts of Miners Lane, I consider that adverse effects on visual amenity will range up to a moderate – low degree.”
47. He made a similar observation with respect to views from Sunderland Street and the Clyde Lookout Road area, but added that approaching the lookout, the proposed structures would become just one more element within a view dominated by the dam itself.
48. The proposed activity would be visible from elevated farmland west of Lake Dunstan, but this was steep and unoccupied pastoral farming land, and similarly the land above and below State Highway 8 was apparently used for forestry and land management. In both cases, there would be few people affected by views obtainable from these locations.
49. From private properties on the northern and western edge of Clyde, he considered there would be some line - of - sight but with restricted views from properties near Matau Street, Miners Lane and the northwestern ends of Sunderland and Hazlett Streets. In his opinion effects on

visual amenity, particularly with the proposed colour controls and landscaping, meant that any adverse effects experienced from these properties would be of a very low degree.

50. **Mr A. Vincent** commented on Mr Espie's evidence in his S42A report, and of the concerns raised in the Wilkes submission. He noted that the proposal would add a new element to an existing area of open space which currently appeared rural in character. However, he considered such an 'industrial use' of the site was appropriate, noting that commercial activities are permitted in the WSMRA. He essentially concurred with the conclusions of Mr Espie and added that (with the exception of some viewpoints along Fruitgrowers Road) the development would be viewed in the context of other built development including rural residential development to the south and west, and the large-scale hydro development associated with the Clyde Dam.
51. In his report he did however express some concerns about the noise mitigation fence, which would look like a solid bland structure. He considered this could have "....a notable adverse visual effect due to its size and uniformity"¹⁰. While proposed plantings would eventually screen this wall, he favoured planting already established plants rather than seedlings, to ensure an adequate degree of mitigation at an earlier stage.
52. **Mr M. Curran** broadly agreed with the conclusions of Mr Vincent. While he agreed with Mr Vincent's recommendation that established plants should be used to screen the noise mitigation wall, he stated that the Structural Landscape Plan already specifies the minimum size of plantings to be used. He considered that any adverse effects on landscape and visual amenity values would be no more than minor.

Assessment of Landscape Effects

53. As seen from Fruitgrowers Road, the proposed datacentre and substation will inevitably be clearly visible from within close proximity, given the relatively open nature of the grassy flat on which the associated structures will be located. I note that given Fruitgrowers Road has recently become the access point to one end of the very popular Dunstan Trail, it can be expected that many more people will pass the site. However, I agree with Mr Espie's observations that given the enormous scale and proximity of the Clyde Dam and its associated structures and transmission lines, the facility would not form an incongruous element given this physical context.
54. The nature and scale of the dam and its surroundings are such in my opinion that the *natural landscape values* of the river corridor in this area have been dramatically modified. Any adverse effects on landscape are confined to potential visual impacts.
55. If viewed from the east the dam creates a dominant physical backdrop. As seen from the western end of Sutherland Street the dam still draws an observer's attention and I again agree with Mr Espie that an observer would need to deliberately focus on the datacentre and substation for the structures to register as a visually distinct feature.
56. Clyde Township is the closest area containing a substantial number of residential dwellings and commercial activities. From my site visit, it was apparent that the proposed activity could be

¹⁰ S42A Report, paragraph 6.8

seen from parts of Miners Lane and potentially the rear of a limited number of properties at the western end Clyde Township, but from an oblique angle. I consider that the interruption to the openness of the grassy flat containing the application site as seen from Clyde would be less pronounced than from a more elevated position. The application site is also partly obscured by vegetation in a number of places.

57. The application site would not be visible from the great majority of properties within Clyde Township. I also accept that from elevated positions within the ONL landscape on the mountain range to the south, and from below State Highway 8, there would be few people likely to be affected by the visual impact of the proposed facility.
58. In my assessment, the proposed activity is located such that it would have little impact on the historic character of Clyde and would instead be associated with the dominant presence of the nearby dam with its associated infrastructure.
59. The proposed acoustic wall is much higher (3.5m) than a typical fence and I agree with Mr Vincent that it could potentially be perceived as a bland and artificial presence in the landscape. However, I am satisfied that the landscaping scheme proposed for the site will, with time, sufficiently screen its appearance such that any visual impacts would be less than minor. I agree that some variation in the scale and placement of vegetation as proposed would be preferable to establishing a solid 'artificial wall' of vegetation to 'hide' the proposed facility. The substation and datacentre will interrupt the existing open space, but the great majority of the surrounding grassed area will remain open. While I understand it is possible for the public to access this space, it is not intended (or encouraged) to function in the same way as a public reserve.
60. I also noted this point that as the NOR for the substation has been consented, it now effectively forms part of the existing environment. Visually, substations are very utilitarian facilities and it will be readily apparent as seen from Fruitgrowers Road, even if the datacentre were not to proceed.
61. Prior to and during the course of the hearing there was further clarification, and what I believe was a clearer understanding of the nature and scale of plants to be established around the site, and I understand that the planting programme proposed by Mr Espie is acceptable to the Council. Overall, I agree that with the mitigation measures proposed the effects on visual amenity and on rural amenity would range from low – moderate initially and declining to low with the maturity of screen vegetation. Accordingly, I consider that landscape impacts associated with this proposal will be no more than minor and less than minor in the medium and longer term.

Noise Effects

62. **Ms Elizabeth Paxton** began by noting that since her original report on anticipated noise levels, she had received additional information from Lake Parime and had consequently updated her noise level predictions. This confirmed that air filters would not be installed to the container exhaust louvres, and that these changes resulted in increased predicted noise levels at the

nearest dwellings that risked exceeding the District Plan noise standards¹¹. These standards set a daytime standard of 55dB L_{A10}. The nighttime limit is 40dB L_{A10}.

63. The dominant noise sources associated with the proposal would be the small cooling fans in each of the datacentre servers, which will run at higher speeds during greater ambient temperatures with the result that noise levels will be higher during hot weather. She undertook her assessment based on maximum temperatures for Clyde during daytime and nighttime periods. She said the sound was characterised as being a broadband noise with a high-frequency tonal component which could be described as a whine.
64. As a result, she said that additional noise reduction measures were required and if implemented would still result in an overall change in noise levels (compared to those in the original report) that would be imperceptible. Predicted noise levels would be at least 8dB lower than the standard set in the Central Otago District Plan. She said that noise from the datacentre may just be audible at the nearest dwellings on quiet nights during hot weather but inaudible at other times, and that noise at the predicted levels was unlikely to result in adverse effects even on sensitive individuals¹².
65. To provide sufficient noise attenuation, three measures are proposed:
- Acoustic treatment to louvred faces of each container;
 - Absorbent facing to the side of barriers facing the courtyard between containers;
 - A 3.5 m high noise control barrier.
66. Her predicted noise levels were set out in Table 2 of her evidence. This evidence was that predicted noise levels would not only be significantly lower than the District Plan limits, but also national and international guideline levels for residential amenity.
67. The assessment locations included 1 Miners Lane, 1, 3, and 11 Sunderland Street, 28 Fruitgrowers Road and 37 Fruitgrowers Road. I note that Table 2 indicated a predicted daytime noise level of between 34 and 37dB L_{A10} at these sites, and between 29 and 32 dB L_{A10} at night time.
68. Turning to ambient noise levels, in her view ambient noise levels from all sources including traffic on State Highway 8 and local roads would mask noise from the datacentre so it would generally be inaudible and that daytime noise effects would be negligible¹³.
69. Her colleague (Mr Rob Hay) had undertaken nighttime noise surveys based on a still night after 2300 hours when there were few vehicles on nearby roads. She conceded the point made by Mr Vincent that sound levels measured on one night could not capture the full range of ambient conditions, but said that her conclusions were based on a 'worst-case' scenario. The measured ambient noise levels were set out in Table 3 of her evidence.

¹¹ Evidence E. Paxton, paragraph 3.3

¹² Ibid, paragraphs 3.5 – 3.7

¹³ Ibid, para 4.18

70. Through the hearing she remained confident that predicted noise levels from the datacentre would be lower than measured ambient levels at all assessment locations at night and given the tonal character of server noise, might just be audible at the nearest dwellings on quiet nights during hot weather but inaudible at other times¹⁴.
71. NZS6802: 1991 provides for a Special Audible Character correction when a noise source has a particular characteristic (tonality) whereby a penalty of 5dB is imposed. She submitted that the District Plan noise standards would be achieved even if this penalty were applied, although she took the view that this particular noise source would not justify the imposition of the penalty.
72. In response to a preceding Section 92 RMA request from the Council, she considered the cumulative noise effects of the proposal, including from existing noise sources and predicted worst-case scenarios from the datacentre, would result in a noise level less than 1dB higher than the existing ambient noise level at all receivers, a level which would be imperceptible to an observer¹⁵.
73. However, she said if changes were subsequently made to the proposed server types or to the proposed acoustic treatment to the container louvres, she recommended that the proposals would need to be reviewed by a suitably qualified acoustician to ensure ongoing compliance with the District Plan noise standards.
74. She noted that the submissions of Nicholas Johnston and Bridget Lloyd-Johnston had sought that a daytime noise limit of 50dB L_{aeq} and nighttime noise limit of 40dB L_{aeq} , be applied, and also extending into weekends, as set out under the summary of their submission earlier in this decision. Ms Paxton noted that these were 5dB more restrictive than the district plan limits during the daytime and had been requested to apply for extended periods. She said that while the limits sought by the submitter would in fact be achieved, she considered they were not necessary to protect residential amenity and that contemporary district plans did not set differing noise levels during weekends.
75. In response to the submissions of Wendy and John Muir that the topography of the area and prevailing winds would exacerbate noise levels, she said that noise from the datacentre used 3D modelling software based on local terrain data and the calculations made were conservative. This was because the calculations assumed that wind was blowing from each noise source towards sensitive receivers (in the township) at the same time. She said that noise from the datacentre would not create a distinct echo because it was continuous and well masked by other noise sources. She said s with residents living near datacentres in the US (raised in a submission) were not necessarily comparable, because some jurisdictions there permitted higher noise levels than under the Central Otago District Plan. She also said that the level of noise depended on the scale of the datacentre and the type of ventilation and cooling systems used.
76. She recommended that an additional condition be added that set noise limits in terms of the latest versions of the relevant standards. The suggested condition was:

¹⁴ Evidence E. Paxton, paragraph 4.22

¹⁵ Ibid, paragraphs 4.25

Noise from the operation of the datacentre shall comply with the following noise limits when measured in accordance with NZ 6801:2008 "Acoustics – Measurement of environmental sound" and assessed in accordance with NZ S6802: 2008 "Acoustics – Environmental noise". The limit shall apply at any point within the notional boundary of any dwelling or within any Residential Resource Area:

<i>On any day 0700 to 2200 hours</i>	<i>55dB L_{Aeq}</i>
<i>2200 to 0700 hours</i>	<i>40dB L_{Aeq} and 70 and 70db L_{AFmax}</i>

77. In his report, **Mr A. Vincent** said he shared the submitters concerns that two nights of data may not be representative, and that as both measurements were taken at night in the middle of winter these should produce noise levels quieter than at other times of the year. He said that because of these uncertainties, a condition requiring a period of noise monitoring should be undertaken should the application be approved, noting that such an approach was supported by the applicant's consultants. In his evidence he said that the datacentre would generate a constant hum from the cooling fans and generate noise at a higher pitch than from the dam.
78. However, he considered that the noise generated would not have a more than a minor effect on the wider environment. He noted that the standards requested through the Johnston submission would be likely to be achieved albeit they were more stringent, but he did not agree that it was necessary to include the submitter's proposed standards as a stand-alone condition. However, he did express concern at setting a condition based on the District Plan standards, given the modelled noise outcomes were at a significantly lower level.
79. He concluded that the proposal would have an adverse noise impact, but that it would be adequately mitigated through the measures proposed by the applicant which should form the basis of conditions of consent. Apart from undertaking a period of noise monitoring following the establishment of the datacentre, he also recommended that a review condition under section 128 RMA be imposed such as to allow for more stringent mitigation measures should that prove necessary as a result of the monitoring results.
80. **Mr M Curran** noted that although Ms Paxton's predicted noise assessment had been altered, her conclusion was that noise effects would remain within the standards permitted by the Central Otago District Plan. He noted Mr Vincent's conclusion that adverse effects would be adequately mitigated by the measures proposed by the applicant and that it was appropriate to adopt a monitoring condition¹⁶.

Assessment of noise effects

81. Given the relative scale of the proposed datacentre, and the large number of servers on site, the noise from cooling fans has the potential to create a noise issue in the absence of the necessary mitigation measures.
82. From the evidence, and from questioning Ms Paxton, as an initial point of clarification I was satisfied that the standards contained in the District Plan were typical of many district plans and

¹⁶ Evidence M Curran, paragraph 4.15

were in fact somewhat more restrictive than international guidelines. Furthermore, Ms Paxton had indicated that even if a 5dB tonal penalty under NZS6802 were added to the noise levels monitored on behalf of the applicant, the District Plan standards would still be met.

83. On this basis, I concluded that reasonable confidence could be had that the noise levels generated by the proposed datacentre would not cause disturbance to people or residences in the vicinity, and particularly across the river in Clyde township.
84. The evidence indicated that noise from the datacentre might just be discernible on a warm calm night. The datacentre would still generate a level of noise which was lower than ambient noise levels, this being other background noise from sources including traffic on State Highway 8. The cumulative effects of the datacentre noise in addition to ambient noise would be less than 1dB, a level which any observer would not find discernible.
85. I was satisfied that Ms Paxton's calculations had considered climatic factors, and local topography in arriving at her calculations, including updated information provided by Lake Parime (the proposed lessee), based on other facilities used by this operator.
86. Given the information available, I did not consider it was necessary to adopt as a condition a specified noise standard different to that contained in the District Plan, which as indicated above, does not contain noise standards which could be criticised as unduly liberal. To set a more restrictive standard could create a precedent with implications for the operation of other activities within the District. Although compliance with the District Plan standards is required anyway, I have accepted the applicant's proposal that a condition be imposed requiring compliance with the standards specified in the District Plan. This is discussed further under 'Conditions' below.
87. Although becoming more common, the proposed datacentre represents a type of activity which is relatively new in New Zealand, and certainly in this district. Accordingly, I agree with Mr Vincent to the extent that it is appropriate to impose a review condition under section 128 RMA, including a requirement for monitoring. This would enable further mitigation measures to be required in the unlikely event (based on the evidence) that the noise standards in the District Plan were exceeded. I also note that this would cover a situation which might arise if the type of servers contained on the site were to be changed, and a review for that reason was necessary.

Other matters

88. The issue of potential natural hazards was addressed in a report prepared for the applicant by *Geosolve*. The report noted that several separate fault lines were located within 1.5 km of the site, and the Dunstan Dam Site fault splays were as close as 140m from the site. The site itself is underlain by surface topsoil and fill overlying outwash sands and gravels and then by schist bedrock. There was no evidence of slope instability within the site boundary and specific engineering design was not required.
89. Mr Vincent's S42A report concluded that natural hazards could be assessed in terms of the status of the application as being fully discretionary, but he considered there was sufficient evidence that any effects due to seismic hazards in the area would be minor and noted that the

site would not be permanently staffed. Mr Curran noted that any adverse effects would be minor and would be mitigated by adopting the recommendations in the *Geosolve* report.

90. With respect to services, on advice from the Council's engineering staff, Mr Vincent recommended that Lot 1 have a new water connection and that both lots have separate connections for wastewater disposal. These conclusions were based on the possibility of the future joint ownership issues for the two lots, and that the use of the site may change to one that requires wastewater disposal. He also considered that provision needed to be made for water supply for firefighting purposes.
91. Mr Curran agreed that it was appropriate to provide separate operational water connections for Lot 1 and the datacentre, but he did not agree that the applicant be required to confirm that wastewater could be disposed of within the application site, to provide water for firefighting, or to provide water to meet New Zealand drinking water standards. The reason for this was that the proposal did not include buildings that generate wastewater (e.g. permanent on-site staff) or activities that required water for drinking or firefighting. He said this had been confirmed by Aurora.
92. He considered that these conditions were unnecessary and onerous and should only be required if a change in land use occurred on Lot 1.
93. No issues of any significance were raised with respect to vehicle access and parking, or in terms of vehicle movements to and from the site. Mr Vincent's report briefly addressed the issue of public access, which he noted is an important matter for consideration including for esplanade reserves or strips along riverbanks. While the proposal would fence off part of the margin of the Clutha River/Mata Au, there was no current legal access to the river from the site with the river surface being owned by Contact Energy as part of Lot 1 DP 25146. He said the area should be considered potentially dangerous when large volumes of water would spill downstream without warning. The proposal would not have little effect on existing public access and he considered it undesirable to encourage the public to access the river in this location. I agree with his conclusions, and I note that Mr Curran also concurred with this assessment .

Planning Issues

94. **Mr A. Vincent** considered noise and visual effects to be the most relevant and potentially significant effects. He considered that the effects related to public access, landscape character, the values of the river and the assessment of the subdivision, did not derive any benefit from the permitted baseline.
95. Mr Vincent advised that the report on notification prepared by the Council had assumed the District Plan did not limit the types of activities that could occur within structures. In his report he expressed the view (based on legal advice obtained by the Council) that this may have been incorrect, and "*.....that as the servers require physical structures to exist, they cannot be considered permitted activities in their own right and their effects can be fully considered as part of the resource consent process*"¹⁷. This view was accepted by the applicant.

¹⁷ S42A report, paragraph 5.1

96. He went on to express the opinion that the scale and nature of the effects of the proposed datacentre would likely be similar regardless of the types of data being processed, and that its direct effects relate to the volume of data being processed, not the type of data. He concluded that the applications for land use and subdivision could be granted consent pursuant to sections 104 and 104B of the RMA.
97. **Mr M. Curran** addressed the matter of consent under the National Environmental Standard Contaminated Soils (NESCS) as a 'HAIL' activity. He said that while the proposed change in land use was permitted under the NESCS, it was proposed to disturb approximately 1380m³ of soil which does not comply with the permitted activity standards of the NESCS. I understand consent under the NESCS has now been obtained separately as confirmed by Mr Robinson.
98. He noted that the section 42A report did not recommend a lapse date or restricted duration for the resource consents sought. In his opinion they should apply in perpetuity¹⁸, but if I were minded to specify a lapse date, he suggested the standard five-year lapse date should apply¹⁹. This issue did not rise subsequently, nor does it appear to be included in either the applicant's or the Council's draft conditions. On this basis, it would appear appropriate that the provisions of section 125(1)(a) apply, and that consent lapse five years from the date of the approval of this application.
99. With respect to the permitted baseline²⁰, Mr Curran referred to Rule 5.7.1 (ii) which permits Scheduled Activities lawfully established prior to notification of the Central Otago District plan. He noted the application site was located within Scheduled Activity 105 on Planning Map 42. This provides for the operation, maintenance, refurbishment and enhancement of power generation facilities. He also asserted that Rule 13.7.4(i) in the district plan provides for new activities associated with the generation of energy as controlled activities. He contended that there are a number of activities which do form a permitted baseline but conceded these were not similar in scale or nature to the proposal. He agreed with Mr Vincent that the proposal does not benefit from a permitted baseline in terms of visual effects, but argued it was relevant in terms of natural character and noise effects.

The Applicants Right of Reply

100. Mr Robinson noted his understanding that both Mr Curran and Mr Vincent were agreed as to the relevant noncompliances to be assessed with this application, and that they be bundled as a full discretionary activity. Apart from that, his submissions focused on the areas of disagreement with the conditions recommended by Mr Vincent for the Council, which I go on to consider under the heading of 'Conditions' below.

Positive Effects

¹⁸ Section 123 (b) RMA; evidence M Curran, paragraph 3.20

¹⁹ Section 125 (1) (a) RMA; evidence M Curran, paragraph 3.21

²⁰ Section 104 (2) RMA

101. The establishment of the proposed datacentre would result in efficient and sustainable use of energy from the Clyde Dam. The subdivision (and separate Notice of Requirement) for the substation would subsidise the upgrading of the substation facility serving the township and its surrounds. It is apparent that datacentres are becoming more important facilities with the growth in information technology, and to that extent an approval of this application would potentially provide a significant benefit. There is a possible but undefined local benefit with respect to the establishment of the datacentre.

OBJECTIVES AND POLICIES

Central Otago District Plan

102. A number of the objectives and policies have very general application to issues of landscape or amenity, and some provisions contain clauses which are not directly relevant to the matters raised by this application. Accordingly, the following assessment addresses those objectives and policies which have primary relevance of the proposal.

103. Section 4 the ODP relates to the Rural Resource Area. Objective 4.3.3 seeks to maintain and enhance rural amenity values created by the open space, landscape, natural character and built environmental values of the district's rural environment and the open character of the hills and ranges. Objective 4.3.5 seeks to maintain and enhance the quality of the district's water resources including adverse effects of land use activities adjacent to water bodies. Objective 4.3.6 seeks to preserve the natural character of the District's water bodies and their margins.

104. *Policy 4.4.10 states:*

To ensure that subdivision and use of land in the Rural Resource Area avoids, remedies or mitigates adverse effects on:

- (a) The open space landscape and natural character and amenity values of the rural environment in particular the hills and ranges,*
- (b) the natural character and values of the Districts wetlands, lakes, rivers and their margins,*
- (c) the production and amenity values of neighbouring properties,*
- (d) the safety and efficiency of the roading network,*

.....

- (i) Public access to or along the rivers and lakes of the District, particularly through the use of minimum (and average) allotment sizes.*

105. As indicated previously, I do not consider that the application site and its surrounds exhibit significant natural values given the dramatic degree of modification undertaken to the river and its margins. Adverse visual effects on the amenity, landscape and natural character of the surrounding hills are expected to be negligible given that the scale of development and the immensity of the nearby dam structure and its surrounds. There is a minor adverse effect on the open space character of the flat open space adjacent to Fruitgrowers Road in the vicinity of the site. The site is sufficiently distant from the nearest residential properties that effects on their amenity values would be negligible, and the site and its surrounds are not used for productive agricultural purposes.

106. Traffic movements to and from the site are expected to be minimal, particularly given no permanent staff will be based thereon, and parking provision would in my opinion be more than sufficient to cope for any demand likely to arise.

107. I agree with Mr Vincent's observation that public access to the river corridor in the vicinity of the site should not be encouraged reasons of public safety, having regard to the potential for fluctuations in river level resulting from managing the volume of water within Lake Dunstan. Overall, I consider that the proposed activity is not contrary to Policy 4.4.10.

108. Policy 4.4.8 states as follows:

*"Adverse Effects on the Amenity Values of Neighbouring Properties
To ensure that the effects associated with some activities including (but not limited to):
(a) Noise (including noise associated with traffic generation, nighttime operations) and vibration
....."*

109. Chapter 12 (District Wide Rules and Performance Standards), Objective 12.3.2 states:

*"Protection from Noise

To avoid, remedy or mitigate the adverse effects of noise on the District's amenity values and the health and well-being of the District's people".*

110. Policy 12.4.2 states as follows:

*Noise
To determine the suitability of noise generating activities in any given locality by having regard to:
(a) the specific characteristics and amenity values of the locality from which the noise originates, and
(b) the sound pressure level of the proposed activity, and
(c) the frequency that the noisy activity takes place, and
(d) the length of time that the noise continues, and
(e) any special characteristics of the noise to ensure that the adverse effects of noise on other activities and the natural and physical resources of the locality (excluding cumulative effects) reflects standards acceptable to the community.*

111. I consider that noise is the single biggest issue arising from this application. Much is now known about the potential of a wide range of activities to generate noise effects, and the characteristics of such noise. I am conscious that this application introduces an activity which is relatively new within New Zealand and certainly within the District, and in a location which has perhaps unusual topographical characteristics given the presence of the nearby Clyde Dam.

112. I understand that the noise generated will be continuous for significant periods and may be higher during warmer periods as part of the necessary cooling requirements for the servers within the datacentre. Nevertheless, I am satisfied that the applicant has been sufficiently diligent in taking any potential effects into account with respect to their modelling of

anticipated noise impacts (the nature of the noise, its tonal characteristics, climatic influences, and proximity to residences).

113. I am satisfied that the District Plan noise standards are fit for purpose with respect to ensuring sufficient protection of residential amenity, and that the noise level is expected to be generated by the proposed facility will comfortably comply with the plan standards. I consider that the proposed activity is not contrary to the above objectives and policies relating to noise effects.
114. Objective 12.3.4 and Policy 12.4.7 addresses the management of nuisance effects including odour, light spill and glare, dust, electrical interference and the use of enjoyment of neighbouring properties.
115. No issues were raised through the evidence or at the hearing with respect to the adverse effects addressed by the above objective and policy.
116. Objective 5.3.1 is to maintain and enhance the amenity values, environmental quality and the natural character of the District's rivers and their margins. Policy 4.4.13 and Policy 5.4.1 seek to promote public access to significant natural and physical land features, including those of value for recreational purposes, and to manage the effects of activities upon the water surface and margins.
117. As noted above, the application site adjoins a section of the Clutha River/Mata Au immediately below the discharge point for water from the Clyde Dam. It is in a section of river corridor which is severely modified, and which is at least potentially unsafe for public access. This is a distinguishing factor for this part of the river corridor and its margins, and for this reason I am satisfied that the proposal is not contrary to this objective and policies.
118. Policy 12.4.1 seeks to avoid adverse effects on the safe and efficient operation of the roading network, true safe and efficient access points off road loading and manoeuvring space and off-street parking.
119. No staff are proposed to be permanently based on site and traffic movements are likely to be of a low frequency and sufficient parking spaces are to be provided. The proposal is consistent with Policy 12.4.1.
120. Objective 5.3.5 seeks to recognise and provide for Kai Tahu ki Otago's spiritual beliefs, cultural traditions and practices in the management of the surface and margins of the District's water bodies. As noted before, the written approval of Te Ao Marama was provided to the applicant, and no issues of potential concern to Maori were raised during the course of the hearing.

The Proposed Otago Regional Policy Statement

121. The applicant's AEE provides a detailed analysis of the relevant provisions of the Partially Operative Otago Regional Policy Statement 2019 and the Proposed Otago Regional Policy Statement 2021. The provisions of both documents provide a 'high level' overview of resource management issues in the region, but detailed objectives and policies are found at the district plan level.

122. That said, I note that Policy 4.5.2 of the partially operative RPS (Integrating infrastructure with land use) promotes the need to address (iii) reasonably foreseeable change in the supply of, and demand for, infrastructure services and (vi) co – dependence with other infrastructure. The proposed activity is consistent with this particular policy.
123. Both Mr Vincent²¹ and Mr Curran²² conclude that the proposal is consistent with the relevant provisions at the Regional Planning level, and I agree with their findings.

PART 2 AND SECTION 104 RMA

124. Section 6 RMA requires the consent authority to recognise and provide for the preservation of the natural character of rivers and their margins (subsection (a)) the maintenance and enhancement of public access to and along rivers (subsection (d)) and the management of significant risks from natural hazards (subsection (h)).
125. All of the above matters have been addressed through the application and evidence relating to it. I do not consider that this proposal in terms of its scale and location gives rise to matters subject to Section 6. The river margins in this area have been dramatically modified as a result of the construction and operation of the Clyde Dam, and the geotechnical report prepared on behalf of the applicant establishes that there are no significant risks to the site from natural hazards. I agree with Mr Vincent that public access would still be readily available to the river margin, although I also acknowledge with that this is not to be encouraged in this particular locality given the risks associated with managing discharges from Lake Dunstan.
126. I consider the following clauses of Section 7 RMA are relevant to this proposal, and to which particular regard should be had;
- (b) the efficient use and development of natural and physical resources;*
(ba) the efficiency of the end use of energy;
(c) the maintenance and enhancement of amenity values;
(f) maintenance and enhancement of the quality of the environment;
(j) the benefits to be derived from the use and development of renewable energy.
127. The proposed activity would make efficient and sustainable use of renewable energy from the Clyde Dam as explained in Mr Brinsdon’s evidence. Accordingly, I conclude it is consistent with, and gives effect to, subsections 7(b), 7(ba) and 7(j) of the RMA.
128. Two issues are potentially raised with respect to amenity values and the maintenance and enhancement of the quality of the environment, these being visual impacts and noise. Subject to the imposition of conditions attached to this consent, I am satisfied that any adverse effects on the environment will be no more than minor and not contrary to subsections 7(c) and 7(f) RMA.

²¹ S42A report, paragraph 8.1

²² Evidence M Curran, paragraph 6.3

129. The proposed activity falls to be assessed as a discretionary activity (unrestricted). The consent authority has discretion as to whether to grant or decline consent under section 104 of the RMA.

130. The relevant provisions of section 104 of the RMA are as follows:

104 Consideration of applications

(1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to –

- (a) any actual or potential effects on the environment of allowing the activity; and*
- (ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate any adverse effects on the environment that will or may result from 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.

(2) when forming an opinion for the purposes of subsection (1) (a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.

.....

(3) a consent authority must not, –

- (a) when considering an application, have regard to –*
 - (i) trade competition or the effects of trade competition; or*
 - (ii) any effect on a person who has given written approval to the application.*

.....

131. I have considered the potential adverse effects of the proposed activity on the environment and have concluded that they will be no more than minor. Apart from conditions to mitigate potential adverse effects of noise and visual impacts, there are no measures proposed (or required) by the applicant to offset or compensate any adverse effects.

132. There are two relevant National Policy Statements, one for renewable electricity generation and another for electricity transmission. The application is broadly consistent with the direction of these NPS documents to the extent that the proposal would make efficient use of electricity, and the proximity of the datacentre to the source of electricity provided by the Clyde Dam reduces transmission losses.

133. The proposal is consistent with the provisions of operative Central Otago District Plan, and the applicable regional planning instruments. Apart from Te Ao Marama, no other written approvals were provided to the application to my knowledge.

134. The specialised nature of the proposed activity is such that it is unlikely to have been contemplated at the time the District plan was formulated, and it is not a permitted activity within the Water Surface and Margin Resource Area. I have not given significant weight to the application of the permitted baseline, except to note that the uncontested evidence clearly establishes that the activity will comfortably comply with the applicable noise standards in the District Plan.
135. Overall, I consider the proposed activity is consistent with achieving the purpose of the Act under section 5 RMA.

CONDITIONS

136. Although there was agreement between both the Council's planner (Mr Vincent) and the applicant's planner (Mr Curran) that consent could be granted to the application, there was a significant difference of opinion with respect to two of the conditions that might be applied to any grant of consent.
137. It is my normal practice as a Hearings Commissioner (and I believe common practice generally) the applicant and the Council are normally asked to confer over final conditions of consent in order to narrow the scope of potential matters in issue. This is without prejudice to the right of either party to disagree over the inclusion of particular conditions, or the wording contained in them. In this case, it appeared that the parties did not confer following the conclusion of the formal online hearing, and I apologise if I did not make that clear. Accordingly, I accepted that Mr Vincent on behalf of the Council be given the opportunity to comment on the conditions as proposed by the applicant.
138. This revealed that there were two issues over which the Council and the applicant were in disagreement. These were also the two conditions which were the primary source of dispute even prior to the close of the hearing.

Setting a condition to manage noise

139. The first of these relates to a condition setting a noise standard to be achieved. The applicant sought that a condition be imposed (set out under paragraph 76 above) which would require compliance with the District Plan noise standard, modified to adopt the updated dB_{Leq} descriptor under NZS6801:2008, rather than the dB_{A10} descriptor used in the District Plan. Although raised as a potential concern of the Council in Mr Robinson's closing submissions, my understanding was that there was no dispute as to the use of this descriptor, which sets sound levels for a receptor which would be practically identical under either descriptor. To my knowledge the 2008 standard is now almost universally used for setting noise standards in conditions.
140. Mr Vincent was of the view that the sound levels set through conditions should achieve those modelled in the noise assessment undertaken by Marshall Day and addressed in evidence by Ms Paxton. These modelled levels are well below the noise levels permitted by the standards in the District Plan. The basis of his assertions were that the Council was not obligated to apply the permitted baseline; that noise effects were not generated from a permitted activity; the activity was discretionary and all effects could be taken into account; that noise effects would

be minimal at the levels calculated; multiple submissions had expressed concern about noise; and that the applicants proposed conditions would set a sound level notably higher than that calculated and assessed (i.e. the level permitted under the District Plan), the effects of which had not been considered.

141. In his closing submissions, Mr Robinson briefly addressed the matter as to whether the applicant should be conditioned to comply with the sound levels measured by Marshall Day, or those specified in the District Plan. He submitted that the standards in the District Plan reflected those derived by the community in the formulation of its District Plan and accorded with international standards. On that basis, he submitted it was not reasonable to expect compliance with the sound levels determined by modelling undertaken by Marshall Day, which were significantly lower, and the purpose of which was to determine compliance.
142. The only expert evidence with respect to potential noise levels from the proposed datacentre was that of Ms Paxton of Marshall Day. No expert evidence on the subject was called by either the Council or by submitters, and her conclusions were not disputed. I was certainly not of the impression that Ms Paxton was contemplating that the modelled sound levels presented in her evidence were intended to form the basis of conditions of consent on the application. As is normally the case where an activity may raise noise effects, my understanding of her evidence was that she was seeking to establish that the modelling showed that the proposed activity would comply with the standards contained in the District Plan, not as a platform for imposing conditions. In the absence of compelling technical evidence to the contrary, I do not believe it would be appropriate for me to conclude that sound levels in excess of those modelled, but below the levels permitted under the District Plan, would still be excessive and therefore unacceptable. To do so would be tantamount to calling into question the adequacy of the plan provisions, a matter which would properly be the subject of a plan review or plan change.
143. In my previous experience of hearing applications involving noise, I am not aware of any examples where conditions have been set requiring compliance with specified modelled sound levels below those permitted by the District Plan. I consider the concept of the permitted baseline is something of a distraction in this respect. The District Plan sets standards established through a public process, of which noise standards are but one example. This process establishes standards which represent a threshold below which noise effects are considered acceptable by the community. As I noted earlier, the noise standards specified through the Central Otago District Plan are similar to those in many other district plans, if anything are more strict than international standards, and reflect the provisions of the relevant New Zealand Standards. They take into account such matters as whether the sound levels experienced would disturb sleep.
144. I have considered whether it might be appropriate to add a 5dB tonal penalty by way of a condition, to be measured and complied with at the various properties which were subject to noise modelling. However, I have no expert evidential basis on which to arrive at such a conclusion contrary to the evidence of Ms Paxton, which did not support the addition of a tonal penalty as provided for under NZS 6802. While the potential adverse effects of the proposed activity at the modelled levels were being called into question, there was no contrary expert evidence to support those concerns.

145. The noise levels modelled in the evidence did not in my opinion reflect a level at which the noise from the datacentre would be only 'just bearable' by receptors. They indicated that with the mitigation measures proposed, the noise generated by the proposed activity would be barely discernible (and even then only on some quiet summer nights), and the sound generated would be at or below ambient noise levels²³. I can imagine the practical difficulties of attempting to take enforcement action should the sound levels exceed those modelled, but which could still be shown as still being in compliance with the District Plan. Quite apart from that, there was no evidence that the noise levels would in fact be well above those modelled and contained in Ms Paxton's evidence, and/or approaching the district plan limits.
146. While I acknowledge Mr Vincent's concerns, I consider that these are best addressed through a monitoring condition, and review condition under section 128 RMA bearing in mind that this is a 'different' kind of application, and it is appropriate to take into account potential unknowns. Given the results obtained from modelling it would be surprising if this revealed that once in operation the proposed facility would exceed the noise standards specified in the District Plan to anything other than a minor degree. However, the imposition of monitoring and review conditions is intended to ensure that the standards in the *District Plan* are not breached, not the levels revealed through the modelling exercise.

Setting a condition relating to firefighting water storage

147. The Council was strongly of the opinion that a condition be imposed requiring provision for water storage on site for the purpose of firefighting. Initially, some of the discussion focused on the potential need for fire suppression in association with the proposed substation, where it was pointed out to me that there was no requirement that such facilities elsewhere in the district provide water storage for firefighting. The issue then became one of whether on-site water storage for firefighting was appropriate with respect to the datacentre, which was the position advanced by Mr Vincent.
148. The applicant responded to this (upon advice by the proposed lessee, Lake Parime) by pointing out that given the nature of the datacentre, any fire would be extinguished using CO₂ extinguishers at the doors of each container. It was my understanding that all parties agreed that the use of water to suppress fire within the datacentre would not be appropriate. In his response to the proposed condition to accompany consent, Mr Vincent stated:

"I do not disagree that the provisions of the District Plan include scope for Council to impose a differing standard to NZS4404:2004 and the Council's 2008 addendum in some cases. However Council requires adequate information to be satisfied that such a departure is appropriate. In this case, as I explained at the hearing, Council imposes firefighting provision requirements in order to ensure that Fire and Emergency New Zealand (FENZ) are able to fulfil their role in managing any fire that occurs on the property. Where a departure from the relevant standard as proposed, it is Council's practice to require the applicant to provide written confirmation from a suitably delegated person at FENZ that any proposed firefighting provisions are appropriate in their mind".

²³ Evidence E.Paxton Table 3, Paragraph 4.21

149. He went on to state that the suppression system described for the applicant for the datacentre may be appropriate, but that adequate evidence on that point had not been provided by the applicant.
150. I was somewhat at a loss to understand what the nature of the actual risk (adverse effect) would be from a fire emergency on the site, and there was little evidence on this point. Nor was there any evidence that this was a facility that might create a greater degree of fire risk than the proposed adjoining substation (where electrical equipment is exposed to the elements). One possibility (albeit unlikely) is that an on-site fire might spread to the adjoining grassland. It seemed to me that the basis for the imposition of the condition was that this was to ensure consistency with standard Council practice. I can only assume that if FENZ were consulted, that they would concur that any fire would logically best dealt with using CO₂ extinguishers. On this basis, I understand Mr Vincent now proposes a condition that firefighting water storage be provided on-site or 'such other means' as approved by FENZ.
151. In practical terms, I do not consider that a great deal turns on whether or not a condition of the kind proposed by Mr Vincent were imposed. It would seem improbable that FENZ would not be satisfied with a means of firefighting the same or similar to that proposed by the applicant, and that if so, this would address the Council's concerns with respect to its practices. Although I am not entirely convinced of the need for such a condition, I have concluded that the following condition be added:

Prior to the completion of any building on the lot, firefighting water storage must be provided in accordance with SNZ/PAS 4509:2008; or in the alternative, such other means of firefighting as recommended in writing by Fire and Emergency New Zealand.

DECISION

Overall, I have concluded that the purpose of the Act would be best served by a grant of consent in this case. I have resolved that pursuant to sections 104, 104B and 108 of the RMA, that the application be approved subject to the conditions set out below.



Robert Charles Nixon
Hearings Commissioner.

10 March 2020

APPENDIX 1 – CONSENT CONDITIONS

Subdivision

General

1. The subdivision shall be undertaken in general accordance with the plans and details submitted with the application for resource consent, the amended plan of subdivision attached as Appendix 1, and as amended by the following conditions.
2. Subject to Condition 17, all subdivisional designs and approvals are to be in accordance with NZS 4404:2004 and the July 2008 version of the CODC Addendum.

Advice note:

The July 2008 version of the CODC Addendum referred to in Condition 2 is Council's Code of Practice for Urban Subdivision.

3. Any easements required to protect access or for access to services shall be duly granted or reserved.

Advice Note:

The memorandum of easements prepared for the cadastral dataset submitted for section 223 certification shall show all existing easements or interests carried down onto the new lots or cancelled as appropriate.

Services

4. Prior to Section 224(c) certification, a new vehicle crossing shall be constricted to the boundary of Lot 1 in accordance with Part 29 of Council's Roading Policies January 2015.
5. Pursuant to Section 221 of the Resource Management Act 1991, the following shall be registered as a consent notice on the new Record of Title for Lot 1:
 - (i) Prior to any change in land use from the uses permitted in the CODP plan or the use authorised by RCD10011-46, where the change in land use requires a drinking water supply, the owner or successor shall:
 - a. Undertake a water quality test from the source shall be undertaken by a testing laboratory recognised by the Ministry of Health with bacteriological and chemical testing to the satisfaction of the Central Otago District Council Chief Executive Officer. Any non-compliance with the Maximum allowable Values and Guideline Values under the New Zealand Drinking Water Standards 2005 (Revised 2018) shall be highlighted in the laboratory report and appropriate means of treatment described.
 - b. Adopt point of use treatment to remedy any non-compliant aspects of the water supply necessary to achieve full compliance with the New Zealand Drinking Water Standards 2005 (Revised 2018) by means outlined in the laboratory report or other solutions acceptable to Council.
 - c. For an extension to a network supply, formal evidence shall be provided of the addition of [insert parcel ref] to the network supply, including an adequate daily water entitlement and as-built drawings for the new connection.
 - d. For an extension to a network supply, a suitably sized connection shall be installed a toby valve assembly and meter/restrictor located at the Lot 1 boundary.

- (ii) Prior to any change in land use from the uses permitted in the CODP plan or the use authorised by RCD10011-46, where the change in land use requires access to water to address the risk of fire, the owner or successor shall provide water storage in accordance with SNZ/PAS 4509:2008 or such other standard as approved in writing by Fire and Emergency New Zealand.
- (iii) The construction of a building that generates wastewater is subject to the following requirements:
 - a. An on-site wastewater disposal system that complies with the requirements of AS/NZ 1547:2012 "On-site Domestic Wastewater Management" shall be designed by a suitably qualified professional.
 - b. The designer shall supervise the installation and construction of the system and shall provide a construction producer statement to the Chief Executive.
 - c. An operation and maintenance manual shall be provided to the owner of the system by the designer and a copy supplied to the Chief Executive. This manual shall include a maintenance schedule and an as-built plan of the system dimensioned in relation to the legal property boundaries. A code of compliance certificate for the dwelling and/or disposal system shall not be issued until the construction producer statement and a copy of the owner's maintenance and operating manual have been supplied to the Chief Executive. The maintenance and operating manual shall be transferred to each subsequent owner of the disposal system.
 - d. Disposal areas shall be located such that the maximum separation (in all instances greater than 50 metres) is achieved from any water course or any water supply bore.
- (iv) Stormwater from buildings and impervious surfaces shall be discharged to soakpits within the site or stored for beneficial reuse within the allotment
- (v) Prior to the completion of any building on the lot, operational electricity and telecommunications connections shall be installed.
- (vi) Any earthworks on the site are to be subject to design, supervision and certification by a suitably qualified engineer, confirming that the site is suitably stable, and the works will not introduce any further instability.
- (vii) As-built records of the final extent and thickness of any un-engineered fill shall be recorded.
- (viii) Any modification to stormwater flows shall be designed by appropriately qualified persons and shall ensure that overland stormwater flows are not interrupted and will not cause localised ponding during storm rainfall events.
- (ix) All temporary slopes shall be investigated and signed off by a suitably qualified person.

6. Pursuant to Section 220(1)(b)(ii) of the Resource Management Act 1991:

That Lot 2 hereon and Lot 2 DP 25146 (Residue RT 149736) be held in the same record of title (See CSN Request 1747894)

Advice Notes:

All charges incurred by the Council relating to the administration, inspection and supervision of conditions of subdivision consent shall be paid prior to Section 224(c) certification.

Development contributions of \$1,494.68 (exclusive of goods and services tax) are payable for roading pursuant to the Council's Policy on Development and Financial Contributions contained in the Long Term Council Community Plan. Payment is due upon application under the Resource Management Act 1991 for certification pursuant to section 224(c). The Council may withhold a certificate under section 224(c) of the Resource Management Act 1991 if the required Development and Financial Contributions have not been paid, pursuant to section 208 of the Local Government Act 2002 and Section 15.5.1 of the Operative District Plan.

Land Use

1. The data centre shall be sited and constructed in general accordance with the plans and elevations attached as Appendix 2 and includes the following structures:
 - a. Up to 8 buildings each up to 47m² in area and 3.2m in height, and containing servers
 - b. Transformer and electricity supply structures;
 - c. An operations building up to 9m² in area and 2.0m in height;
 - d. An acoustically designed and constructed wall up to 3.5m in height along the southern and western side of the facility;
 - e. Facility identification and public safety signage;
 - f. Security and stock fencing.
2. Buildings and the acoustic wall shall have exterior colours from the range of browns, greens or greys with a reflectivity value of less than 36%.
3. Prior to the completion of the data centre, landscaping shall be planted in general accordance with the recommendations of the vivian+espie landscape assessment and the amended landscape plan attached as Appendix 3.
4. Any plants required to satisfy Condition 3 that die shall be replaced within the next growing season.
5. Noise from the operation of the datacentre shall comply with the following noise limits when measured in accordance with NZS 6801:2008 "Acoustics – Measurement of environmental sound" and assessed in accordance with NZS 6802:2008 "Acoustics – Environmental noise". The limits shall apply at any point within the notional boundary of any dwelling or within any Residential Resource Area:

On any day 0700 to 2200 hours	55 dB L_{Aeq}
2200 to 0700 hours	40 dB L_{Aeq} and 70 dB L_{AFmax}

6. The Consent Holder shall comply with noise limits specified in Condition 5 by incorporating the following noise control treatments:
 - a. A 3.5 metre high noise control barrier around the north-east and south-east site boundaries;
 - b. Absorbent facing to the inner face of barriers between the ends of each pair of containers;and
 - c. Either:
 1. Acoustic treatment to all louvred areas of each data centre container sufficient to meet the following parameters:

<i>Element</i>	<i>Minimum insertion loss (dBA)</i>						
	<i>Octave Band Centre Frequency (Hz)</i>						
	<i>63</i>	<i>125</i>	<i>250</i>	<i>500</i>	<i>1000</i>	<i>2000</i>	<i>4000</i>
<i>Acoustic treatment to container louvres</i>	3	4	8	12	17	14	12

Or

2. A combination of equipment selection and acoustic treatments that a Suitably Qualified and Experienced Professional with expertise in acoustics certifies will be sufficient to achieve the noise limits specified in Condition 5.

7. Within 1 year of the data centre becoming operational, the consent holder shall commission and independent person to undertake an assessment of noise levels generated by the data centre in order to confirm that specific noise levels from the development do not exceed the limits in Condition 5 and recommend any additional mitigation measures that might be undertaken to address any additional noise effects if actual noise levels are higher than predicted. A copy of the report shall be provided to the Central Otago District Council.

Advice Note:

The findings and recommendations of this report may be referred to in any decision to review the conditions of this consent as provided for in Condition 19.

8. Prior to establishing a drinking water supply for the datacentre, the consent holder shall:
- a. Undertake a water quality test from the source shall be undertaken by a testing laboratory recognised by the Ministry of Health with bacteriological and chemical testing to the satisfaction of the Central Otago District Council Chief Executive Officer. Any non-compliance with the Maximum allowable Values and Guideline Values under the New Zealand Drinking Water Standards 2005 (Revised 2018) shall be highlighted in the laboratory report and appropriate means of treatment described.
 - b. Adopt point of use treatment to remedy any non-compliant aspects of the water supply necessary to achieve full compliance with the New Zealand Drinking Water Standards 2005 (Revised 2018) by means outlined in the laboratory report or other solutions acceptable to Council.
9. A construction Management Plan (CMP) shall be prepared and submitted to Council for approval at least 10 working days prior to the commencement of works on the site. The approved CMP shall be complied with during the construction phase of the project.
10. Works authorised by this consent shall not commence until the Consent Holder has received written approval for the CMP. Notwithstanding this, the works may proceed if the Consent Holder has not received a response from the Consent Authority within 10 working days of the date of the submission of the CMP.
11. Any earthworks on the site are to be subject to design, supervision and certification by a suitably qualified engineer, confirming that the site is suitably stable, and the works will not introduce any further instability.
12. As-built records of the final extent and thickness of any un-engineered fill shall be recorded and made available to the Central Otago District Council on request.

13. Any modification to stormwater flows shall be designed by appropriately qualified persons and shall ensure that overland stormwater flows are not interrupted and will not cause localised ponding during storm rainfall events.
14. All temporary slopes shall be investigated and signed off by a suitably qualified person.
15. Stormwater from buildings and impervious surfaces shall be either discharged to soakpits within the site, or stored for beneficial reuse within the allotment.
16. Prior to the completion of any building on the lot, operational electricity and telecommunications connections shall be installed underground.
17. Prior to the completion of any building on the lot, firefighting water storage must be provided in accordance with SNZ/PAS 4509:2008; or in the alternative, such other means of firefighting as approved in writing by Fire and Emergency New Zealand.
18. The construction of a building that generates wastewater within the datacentre site is subject to the following requirements:
 - a. An on-site wastewater disposal system that complies with the requirements of AS/NZ 1547:2012 "On-site Domestic Wastewater Management" shall be designed by a suitably qualified professional.
 - b. The designer shall supervise the installation and construction of the system and shall provide a construction producer statement to the Chief Executive.
 - c. An operation and maintenance manual shall be provided to the owner of the system by the designer and a copy supplied to the Chief Executive. This manual shall
 - d. Include a maintenance schedule and an as-built plan of the system dimensioned in relation to the legal property boundaries. A code of compliance certificate for the dwelling and/or disposal system shall not be issued until the construction producer statement and a copy of the owner's maintenance and operating manual have been supplied to the Chief Executive. The maintenance and operating manual shall be transferred to each subsequent owner of the disposal system.
 - e. Disposal areas shall be located such that the maximum separation (in all instances greater than 50 metres) is achieved from any water course or any water supply bore.
19. In accordance with Section 128 of the Resource Management Act 1991, the conditions of this consent may be reviewed on and in the period within 6 months upon each anniversary of the date of this consent, if, on reasonable grounds, the consent authority finds that:
 - a. There is or is likely to be an adverse environmental effect as a result of the exercise of this consent, which was unforeseen when the consent was granted;
 - b. Monitoring of the exercise of the consent has revealed that there is or is likely to be an adverse environmental effect; or
 - c. There has been a change in the circumstances and the conditions of consent are no longer appropriate in terms of the purpose of the Act.