Before the Hearings Commissioners at Christchurch City Council

under: the Resource Management Act 1991

in the matter of: an application by Ryman Healthcare Limited for resource consent to establish and operate a comprehensive care retirement village at 100-104 Park Terrace and 20 Dorset Street, and 78 Park Terrace, Christchurch.

between: **Ryman Healthcare Limited**
Applicant

and: **Christchurch City Council**
Consent Authority

Statement of evidence of **Ajay Anilrao Desai** on behalf of Ryman Healthcare Limited

Dated: 6 January 2021

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STATEMENT OF EVIDENCE OF AJAY ANILRAO DESAI ON BEHALF OF RYMAN HEALTHCARE LIMITED

INTRODUCTION

1 My full name is Ajay Anilrao Desai.

2 I am a Senior Technical Specialist – 3 Waters at Woods. I hold a Bachelor of Civil Engineering and Master of Civil Engineering degrees, specialising in Water Resources and Environmental Engineering, from the University of Pune, India.

3 I have over nine years' of experience as a Civil Engineer on a wide range of 3-water projects in the United Kingdom, Middle East and New Zealand.

4 I have been involved in and prepared numerous catchment scale hydraulic models, integrated catchment management plans and authored various infrastructure reports for private clients as well as district and regional councils.

5 I am a member of Engineering New Zealand, the Chartered Institution of Water and Environmental Management and the Institution of Civil Engineers.

6 My relevant experience includes:

6.1 I was the lead stormwater and wastewater engineer for various neighbourhoods within the Tamaki and Mangere precincts in Auckland for Kainga Ora;

6.2 I was the lead stormwater engineer and completed the stormwater modelling flood analysis and stormwater runoff and overland flow path assessments for:

(a) Drury South Precinct Development, Auckland – 361ha;

(b) Drury East Development, Auckland – 231ha; and

(c) Sleepyhead Estate Development, Ohinewai – 178ha.

6.3 I was the technical reviewer for flood and damage assessments undertaken for various areas affected by the Darfield earthquake that hit the Canterbury region on 4 September 2010.

7 I am familiar with Ryman Healthcare Limited's (*Ryman*) resource consent application to construct and operate a comprehensive care retirement village (*Proposed Village*) at 100-104 Park Terrace and

20 Dorset Street and 78 Park Terrace, Christchurch (*Site*). In this statement of evidence, I describe the parcel of land at 78 Park Terrace as the "Peterborough Site" and the parcel of land at 100 104 Park Terrace and 20 Dorset Street as the "Bishopspark Site". I refer to the Peterborough Site and Bishopspark Site together as the "Sites".

8 Beca Limited (*Beca*) prepared the Civil Engineering Design Report dated 27 March 2020 (*Civil Design Report*), the stormwater aspects of the Section 92 Response dated 18 May 2020, and the earthworks aspects of the Section 92 Response dated 13 July 2020 (*Further Information Responses*).

9 I was engaged by Ryman to review the civil design for the Proposed Village in October 2020. I have reviewed the Civil Design Report and Further Information Responses and agree with their content unless identified otherwise in this statement of evidence. I prepared the stormwater and earthworks aspects of the Section 92 Response dated 17 November 2020.

10 I have visited the Site and its surroundings on 23 October 2020.

CODE OF CONDUCT

11 Although these proceedings are not before the Environment Court, I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note (2014), and I agree to comply with it as if these proceedings were before the Court. My qualifications as an expert are set out above. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SCOPE OF EVIDENCE

12 My evidence sets out the following:

12.1 A summary of the Civil Design Report and the Further Information Responses in relation to:

(a) Earthworks and grading;

(b) Civil services design;

12.2 My response to the civil design issues raised in submissions;

12.3 My response to civil design issues raised in the Council Officer's report, and particularly the accompanying

Earthworks and Construction Report prepared by Yvonne McDonald;

12.4 My comments on the draft conditions; and

12.5 My conclusions.

13 My evidence addresses the resource consent requirements for the Proposed Village under the Christchurch District Plan (*District Plan*). It also provides a brief description of the civil services design for the Proposed Village.

SUMMARY OF EVIDENCE

14 The Proposed Village requires the excavation of approximately 61,500m^2 at the Bishopspark Site and the excavation of approximately 25,000m^3 at the Peterborough Site.

15 The potential for sedimentation and erosion effects during the course of the earthworks will be managed in accordance with the preliminary erosion and sediment control plan (*ESCP*) provided with the application. This plan complies with the Environment Canterbury Erosion and Sediment Control Toolbox for Canterbury. In my opinion, the preparation of a final ESCP at detailed design stage and its implementation during construction will ensure that sedimentation and erosion effects from the earthworks will be appropriately mitigated.

16 The excavation will be mostly carried out below the water table resulting in the excavated material being wet and not producing dust. Onsite dust management measures will also be implemented, which I consider will control the potential for dust nuisance during construction.

17 During the earthworks, the dewatering flows will be discharged to the Christchurch City Council public network. As a result, in my opinion, the potential effects on the Avon River flood water levels and potential adverse flooding effects on downstream properties will be minor.

18 The height levels at the boundaries of the Site have been designed to generally tie into the existing boundary heights. Landscape walls/raised planter beds are to be provided where there are small differences in height to generally remain consistent with neighbouring ground levels. Grades have been designed to direct overland flow paths to the neighbouring street network. In my opinion, no boundary effects will arise from the grading design.

19 The stormwater from the Proposed Village will discharge to the Council network. The Council has confirmed the proposed design

meets the requirements of the Council's global consent for stormwater discharge.

20 The Proposed Village will connect to the nearby electricity, telecommunications, gas, water and wastewater networks, and will therefore be appropriately serviced.

21 I have reviewed the Council Officer's Report and relevant technical assessments and have not identified any material concerns with my original assessment and conclusions. Public submissions did not raise any new matters which I had not already considered. I address conditions later in this evidence.

EARTHWORKS AND GRADING

22 The earthworks for the Proposed Village require restricted discretionary consent (Rule 8.9.2.3-RD1). My evidence considers the matters of discretion relevant to civil design:

22.1 The avoidance or mitigation of dust nuisance;

22.2 Sedimentation and erosion effects;

22.3 The avoidance or mitigation of effects on neighbouring properties and neighbours; and

22.4 The potential for drainage problems.

Existing Ground Conditions
Bishopspark Site

23 The total Site area is 1.23ha. The topography of this Site consists of a high point adjacent to the existing chapel and the land gently sloping to the west. This Site has been cleared of buildings, except for the chapel.

24 The ground conditions (as set out in the Geotechnical Engineering Assessment of Environmental Effects, March 2020 (*Geotechnical Report*) consist of:

24.1 0.3m - 0.5m depth of fill/topsoil; overlying;

24.2 2.7m – 3.5m depth interbedded firm sandy silt and loose sand/sandy silt; overlying;

24.3 4.0m – 4.3m depth fibrous peat and peat with very soft silt; overlying;

24.4 1.0m – 1.75m depth loose silty sand/firm sandy silt; overlying; and

24.5 0.7m – 1.2m medium dense to dense sandy gravel.

Peterborough Site

25 The total Site area is 0.51ha. The topography of this Site is relatively flat with an approximate RL 16.15m. This Site has been cleared of buildings.

26 The ground conditions (as set out in the Geotechnical Report) consist of:

26.1 0.3m – 6.0m depth of fill/sandy gravel; overlying;

26.2 0m – 3.0m depth interbedded firm sandy silt and loose sand/sandy silt; overlying;

26.3 1.0m – 3.7m depth fibrous peat and peat with very soft silt; overlying;

26.4 2.4m – 3.4m depth loose silty sand/firm sandy silt; overlying; and

26.5 2.0m – 9.3m medium dense to dense sandy gravel and gravelly sand.

Groundwater

27 As set out in the Geotechnical Report, groundwater was encountered at depths of approximately 1.5m below ground level (bgl) at both the Sites. This shallow groundwater forms the water table (an unconfined aquifer). Deeper groundwater (a confined aquifer) is present in the Riccarton gravels at a depth of more than 20m bgl.

Grading

28 The proposed earthworks and grading design is shown on drawing 038-RCT_401_C0_010.

29 To establish the extent and scale of earthworks required to satisfy the grading design criteria, Beca created a three-dimensional terrain model (terrain model) for the Sites. The terrain model was subsequently re-created by Woods in the modelling package 12D.

30 The terrain model incorporated the proposed floor and basement subgrade levels defined by Ryman's architectural team, and modelled the external road connections, internal road network, common recreation areas and open spaces.

Bishopspark Site

31 The finished floor level (*FFL*) has been set to RL 16.70m. This FFL is above the minimum floor level requirement set by the Council Floor Level Assessment of RL 16.29m. The FFL is a compromise

between minimising basement excavation, achieving accessible access gradients and tying into the levels at the Site boundary.

32 The basement floor level (*BFL*) has been set at RL 13.10m and preliminary foundation requirements require a further 1.2m excavation to RL 11.90m.[1] The potential effects of this excavation on neighbouring properties has been addressed in the evidence of Mr Pierre Malan.

33 The common areas above the basements will sit on a podium structure set 200mm below the finished level of RL 16.70m to cater for overland flow paths. Refer to Figure 1 below.

Peterborough Site

34 The FFL has been set to RL 16.70m. This FFL is above the minimum floor level requirement set by the Council Floor Level Assessment of RL 16.27m.

35 The BFL has been set at RL 13.10m and preliminary foundation requirements require a further 1.2m excavation to RL 11.90m.[2] The potential effects of this excavation on neighbouring properties has been addressed in the evidence of Mr Malan.

36 As the FFL sits approximately 600mm above the existing boundary levels, small landscaping walls will be provided to accommodate this height difference where required.

37 The common areas have been graded to direct overland flow paths to the neighbouring street network.

Earthworks volumes

Bishopspark Site

38 I estimate the excavation volume will be 61,500m^3 including a bulking factor of 25%.[3]

39 Only a very small amount of this volume will be required and suitable for use as fill on the Site. The surplus material will be removed from the Site and taken to an approved destination.

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[1] Beca Civil Design Report Section 5.2.1 states Basement Floor level is RL 13.50 requiring additional 1m excavation to RL 12.5m. Further design refinement has amended these levels.

[2] Beca Civil Design Report Section 5.2.2 states Basement Floor level is RL 13.30 requiring additional 2m excavation to RL 11.30m. Further design refinement has amended these levels.

[3] Beca Civil Design Report Section 5.2.1 states excavated volume is 55,000m^3 included 25% bulking factor. Due to the BFL update this volume has been updated to 61,500m^3 including 25% bulking factor.

Peterborough Site

40 I estimate the excavation volume will be 25,000m^3 including a bulking factor of 25%[4].

41 Only a very small amount of this volume will be required and suitable for use as fill on the Site. The surplus material will be removed from the Site and taken to an approved destination.

Erosion and sedimentation effects

42 The potential for sedimentation and erosion effects during the course of the earthworks will be managed in accordance with the preliminary erosion and sediment control plan (*ESCP*) provided with the application.

43 The preliminary ESCP details the following measures proposed to address potential sedimentation and erosion effects:

43.1 Silt fences to the Site perimeter;

43.2 Stormwater inlet protection on all neighbouring streets;

43.3 Stabilised construction entrances/exits with a wheel wash to mitigate silt migration from the Site;

43.4 Retention of stormwater within basement excavations;

43.5 Temporary dewatering pumps to draw down ground water for excavation; and

43.6 Dewatering treatment via settlement tanks.

44 The preliminary ESCP complies with the Environment Canterbury's Erosion and Sediment Control Toolbox for Canterbury.

45 I consider the implementation of the ESCP will ensure construction water is treated to the required standard before it is discharged, and any potential effects on the receiving environment will be mitigated.

46 In my opinion, the implementation of the ESCP will ensure the potential for sedimentation and erosion effects from the earthworks will be appropriately mitigated.

Dust effects

47 The excavation will be mostly carried out below the water table. This excavated material will be wet and will not produce dust. The

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[4] Beca Civil Design Report Section 5.2.2 states excavated volume is 32,000m^3 included 25% bulking factor. Due to the BFL update this volume has been updated to 25,000m^3 including 25% bulking factor.

following measures will also be implemented to control the potential for dust nuisance during the construction activity:

47.1 Progressive stabilisation of exposed areas will minimise open exposed surfaces that have the potential to generate dust;

47.2 The use of approved soil binders on exposed surfaces. Soil binders effectively bind together small particles creating a crust, making the particles heavy enough to stop them becoming airborne, even with strong winds; and

47.3 The use of water via water tankers or a sprinkler/irrigation system over exposed area.

48 These measures will be confirmed in the Construction Management Plan (*CMP*).

49 In my opinion, the implementation of the above measures will ensure the potential for dust effects on neighbours will be very low.

Drainage effects

50 During the earthworks, the dewatering flows will be discharged to the Christchurch City Council public network. I understand drainage effects are not a relevant consideration for this application.

Boundary effects

51 The height levels at the boundaries of the Site have been designed to tie into the existing boundary heights.

52 There is a small difference in height between the final levels at the northern and western boundaries of the Peterborough Site and the levels of the neighbouring properties. Accordingly, landscape walls/raised planter beds will be provided in these locations to ensure no boundary effects arise from the grading design.

53 There is also a small difference in height between the final levels of the Bishopspark Site adjacent to Westwood Terrace and the levels of the neighbouring properties. In this location, the Site is slightly lower than neighbouring properties. In order to avoid ponding in this location during large stormwater events (over 1 in 50-year event), a sump connected to a suitably sized slot drain will be provided in this location. This drainage is shown on 038-RCT_401_CO-011.

54 In my opinion, the proposed boundary levels and treatment will ensure there are no effects on neighbouring properties.

CIVIL SERVICES DESIGN

Stormwater

55 The stormwater from the Proposed Village will discharge to the Council network. Accordingly, the stormwater discharge must comply with the requirements of the Council's global consent for stormwater discharge.

56 The global consent requirements are:

56.1 Stormwater Quantity: Stormwater discharge from the Site post-development shall not exceed the stormwater discharge from the Site pre-development for all events up to and including 50-year, 18 hrs rainfall events. Any difference would need to be attenuated on-site;

56.2 Stormwater Quality: Stormwater from all hardstanding trafficable (carparks/driveways) areas will require first flush treatment.

57 The proposed stormwater network design has been discussed with the Council. The Council has confirmed that the proposed design meets the requirements of its global consent.

Bishopspark Site

Stormwater network design

58 In accordance with the global consent requirements, the primary stormwater network has been designed to convey the 50-year ARI event.

59 The proposed stormwater network will consist of pipes, sumps and slot drains. The roof and landscape area drainage will be separated from road access corridor drainage to allow for treatment of the latter.

60 The road access corridor drainage will be discharged to a proprietary treatment device for treatment prior to gravity discharge to the DN225 public main on Park Terrace.

Overland flows

61 There will be no overland flow from the basement ramp. The area discharging to the basement is relatively small and this runoff will be collected by a slot drain and will discharge to a basement sump pump. The slot drain and sump pump will be sized for the 50-year ARI event. It will discharge to the stormwater network (within the Site) and will be treated prior to gravity discharge to the public main.

62 Permeable pavers set on podium jacks will allow for surface water drainage in open areas above the basement as shown in Figure 1.

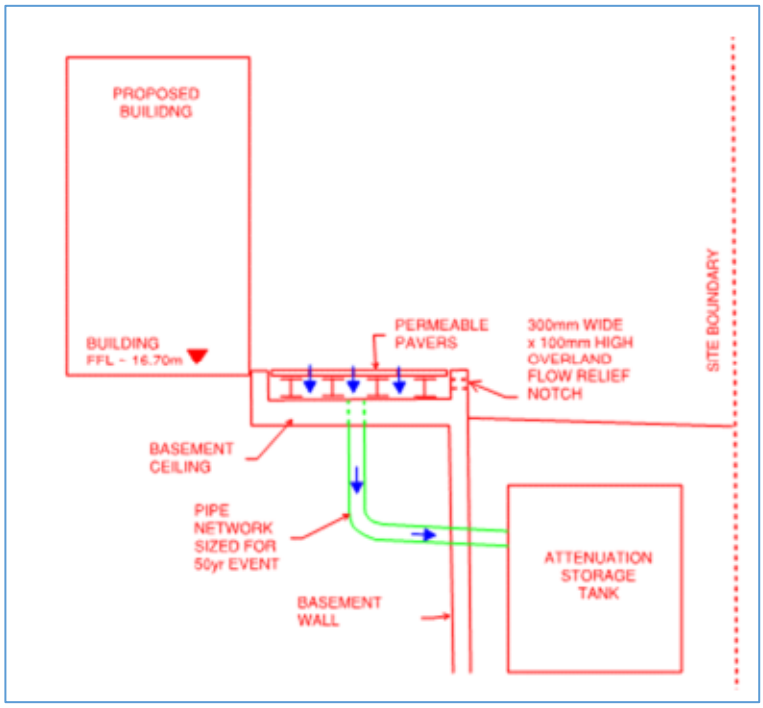

Figure 1: Bishopspark Site Typical cross section of Stormwater Overland Flow Philosophy

63 A series of stormwater overflow relief points will be provided to allow overflow relief for events greater than the 50-year ARI event. These relief points will have invert levels set 50mm above the basement slab (podium) level.

64 Outside of the basement extent, conventional overland flow paths will be provided within the Site margins to Park Terrace, Dorset Street and Westwood Terrace.

65 In a Section 92 request, Council suggested that runoff from stormwater generated from the basement ramps be discharged to the wastewater network. I do not consider it necessary or appropriate to divert this stormwater runoff from basement ramps to the wastewater network, because basement ramps are exposed to vertical rainfall and therefore designed to be discharged to the stormwater network.

Stormwater Attenuation

66 The Proposed Village will result in a 21% increase in the imperviousness of the Bishopspark Site. This additional impervious area will result in an increased peak flow from the Bishopspark Site for rainfall events up to the 50-year ARI 18hr duration event. To comply with the global consent requirements, this increase in peak flows is required to be attenuated.

67 Beca assessed the storage volumes required using HEC-HMS version 4.2.1. This comparison of the pre and post-development

peak flow rates confirmed a volume of 300m^3 needs to be stored. I have re-created this model and confirm this storage volume is adequate to meet the global consent requirements.

68 The Bishopspark Site consists of three catchments[5]. Two of these catchments (C1 and C2) will be attenuated to match pre and post-development peak flow rates for a range of events and durations. However, Catchment C3 has been reduced in area compared to existing scenario, so no attenuation is required to match the pre and post-development peak flow rates.

Stormwater Treatment

69 As discussed above, road access corridor drainage will be treated prior to discharge. For the conceptual design, two Stormwater 360 Stormfilters accepted by Council are proposed at the accesses to Park Terrace and Dorset Street. The treatment devices will be confirmed at detailed design phase.

Peterborough Site

Stormwater network design

70 In accordance with the global consent requirements, the primary stormwater network has been designed to provide treatment of all trafficable areas.

71 The proposed stormwater network will consist of pipes, sumps and slot drains, and will discharge to the DN825 public main on Salisbury Street via DN300 pipe. This connection point has sufficient capacity to accommodate 10-year ARI event peak flows. The existing DN225 stormwater lateral located at the north eastern corner of the Peterborough Site has insufficient capacity and is not ideally located. It will not be used for the Proposed Village.

72 The roof and landscape surface drainage will be separated from road access corridor drainage to allow for treatment of the latter. The road access corridor drainage will be discharged to a proprietary treatment device for treatment prior to discharge.

Overland flows

73 The overland flows from the Peterborough Site will discharge to Salisbury Street and Peterborough Street and will subsequently flow across Park Terrace, overtopping the central crown and discharging to the Avon River.

74 As discussed in paragraph 61 there will be no stormwater overland flow from the basement ramps.

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[5] Beca Civil Design Report Appendix C – Stormwater Calculations.

Stormwater Attenuation

75 As the Peterborough Site was fully developed to approximately 89% Site coverage prior to the Canterbury Earthquakes, the increase in impervious area is negligible. Accordingly, the Peterborough Site does not require attenuation to comply with Council's global consent.

Stormwater Treatment

76 As discussed above, road access corridor drainage will be treated prior to discharge. For the conceptual design, a Stormwater 360 Stormfilter is proposed within the road corridor. The treatment device will be confirmed at detailed design phase.

Rainwater harvesting

77 Some stormwater downpipes will be connected to a storage tank located in the basement, which will be used for general irrigation purposes.

Wastewater

78 I understand the establishment of wastewater connections from the Proposed Village to the public network is a permitted activity. For completeness, I have provided a brief summary of the proposed wastewater network and the demand created by the Proposed Village.

Bishopspark Site

79 The peak wastewater flow rate for the Bishopspark Site has been calculated as 5.4 L/s, based on the anticipated occupancy of the buildings in accordance with the Council's Infrastructure Design Standard.

80 The swimming pool proposed within the Bishopspark Site will limit the backwater discharge at 2.5L/s and limit timing to low demand periods.

81 The proposed wastewater network will consist of three pipelines slung under the basement ceilings discharging to the public mains:

81.1 A proposed DN150 main will discharge to the existing DN150 main on Park Terrace;

81.2 A proposed DN150 main will discharge to an upgraded DN150 (from existing DN100 main) on Westwood Terrace; and

81.3 A proposed DN150 main will connect to the existing DN150 main on Dorset Street.

82 The Council has confirmed the public wastewater network has sufficient capacity to accommodate the peak wastewater flow rate from the Site.

Peterborough Site

83 The peak wastewater flow rate for the Peterborough Site has been calculated as 3.2 L/s, based on anticipated occupancy of the buildings in accordance with Council's Infrastructure Design Standard.

84 The swimming pool proposed within the Peterborough Site will limit the backwater discharge at 2.5L/s and limit timing to low demand periods.

85 The Council has confirmed the existing DN150 lateral connecting to the DN150 main along Salisbury Street has sufficient capacity to accommodate the peak wastewater flow rate from the Site.

Water

86 I understand the establishment of water connections from the Proposed Village to the public network is a permitted activity. For completeness, I have provided a brief summary of the proposed water network and the demand created by the Proposed Village.

Bishopspark Site

87 A new DN110 connection will be provided at Dorset Street, with a new Reduced Pressure Zone (*RPZ*) backflow unit, to supply the potable demand for the Proposed Village.

88 A new DN160 connection will be provided next to the potable water connection at Dorset Street to meet the firefighting needs of the Proposed Village. A new RPZ (separate to the potable RPZ) backflow unit will be provided adjacent to the potable main.

89 The existing DN100 connection at Park Terrace and two DN63 connections at Dorset Street will be decommissioned to Council standards.

90 The peak potable water demand for the Bishopspark Site has been calculated as 6.0 L/s based on the anticipated occupancy of the buildings in accordance with the Council's Infrastructure Design Standard.

91 The required pressure for the potable water is 350 kPa with the flow demand (for fire sprinklers) of 1500 L/minute @ 600 kPa at the supply point. Council has confirmed that there is suitable pressure in the main to service the potable demand requirements, including firefighting.

92 Ryman intends to obtain a transfer of water permit to provide water for irrigation at the Bishopspark Site following approvals for the main village.

Peterborough Site

93 The existing DN100 connection at Peterborough Street, with a new RPZ backflow unit, will service the potable and irrigation needs of the Peterborough Site.

94 A new DN125 connection will be provided next to the potable water connection at Peterborough Street to meet the firefighting needs of the Proposed Village. A new RPZ (separate to the potable RPZ) backflow unit will be provided adjacent to the potable main.

95 The Proposed Village will collect and store roof runoff with approximately 30m^3 of storage (provided via Rotomol storage tank or similar) in the basement. The storage tanks will also be mains fed and will be used for general irrigation purposes. The tanks will supply enough water to allow for about three days of irrigation requirements. The effects of the irrigation demand on the Council's water network is therefore considered to be negligible.

96 The existing DN20 and DN100 connections at Park Terrace will be decommissioned to Council standards.

97 The peak potable water demand for the Peterborough Site has been calculated as 3.6 L/s based on the anticipated occupancy of the buildings in accordance with Council's Infrastructure Design Standard. Irrigation demand for the Peterborough Site has been calculated at 0.60 L/s (irrigating green space at 5mm/m^2 over 5 hours per day).

98 The required pressure for the potable water is 350 kPa with the flow demand (for fire sprinklers) of 1500 L/minute @ 600 kPa at the supply point. Council has confirmed that there is suitable pressure in the main to service the potable and irrigation demand requirements, including firefighting.

Power and Communications

99 I understand the establishment of electricity and telecommunications connections for the Proposed Village is a permitted activity. For completeness, I note that the Proposal will be serviced from existing electricity, gas and communications services in the surrounding streets. The relevant utility providers have indicated there is sufficient capacity to accommodate the Proposed Village.

RESPONSE TO SUBMISSIONS

100 I have reviewed all of the submissions, and have identified the civil design related issues raised by submitters, as follows:

100.1 Dust effects during construction;[6]

100.2 Stormwater effects, and in particular stormwater quality treatment;[7] and

100.3 Earthworks construction effects.[8]

101 I address each of these issues as follows.

Dust effects

102 I have addressed the potential for dust effects at paragraphs 47 - 49 above. In my opinion, implementation of the proposed measures will ensure the potential for dust effects on neighbours will be very low.

Stormwater effects

103 I have addressed the proposed stormwater network at paragraphs 55 - 77 above, including the proposed treatment. The Council has confirmed the proposed stormwater approach meets the requirements of its global discharge consent.

Earthworks effects

104 I have addressed the potential for erosion and sedimentation effects, including effects of the construction phase stormwater discharge, at paragraphs 42 - 46 above.

105 As discussed above, I consider the implementation of the ESCP will ensure potential erosion and sedimentation effects are appropriately mitigated. In particular, construction water will be treated to the Council's required standard before it is discharged.

RESPONSE TO COUNCIL OFFICER'S REPORT

106 I have reviewed the Council Officer's Report and the Earthworks and Construction Report.

107 Ms Yvonne McDonald suggests there is a lack of information regarding cross boundary height differences and proposes a

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6 Including E. & R. Ashford; L. Goodland; B. & M. Logan; D. & A. McLean; D. & L. Worthington; J. Stratford & G. Waddy; P. & J. Marshall; and D. Bruce.

7 Including C. Garlick; Dorset Street Flats Owners Group; and Dr J. Roper-Lindsay.

8 Including G. Dewe; ICON; M. Pascuzzi; C. Bennett; G. Bennett; M. Rinaldo; D. & L. Worthington; and P & J Marshall.

condition to address the potential for drainage and land stability issues. I have addressed these issues at paragraphs 51-54 above, and do not consider any adverse land stability or drainage effects will arise. In any event, conditions addressing this matter have been agreed as discussed below.

108 The Council Officer's Report notes that a small part of the Bishopspark Site is located in a Flood Management Area, but concludes that earthworks in this area will not affect flooding patterns.[9] I agree.

DRAFT CONDITIONS

109 The Council Officer's Report proposes some amendments to the draft consent conditions. I consider the recommended conditions 5-11 and 49-50, including the amendments to conditions 7 and 8 proposed in the evidence of Dr Mitchell, will appropriately manage potential earthworks and sedimentation effects, and ensure the Proposed Village is serviced.

CONCLUSIONS

110 I conclude that there is no civil engineering issue that would preclude the granting of consent for the Proposed Village on the basis of the conditions discussed in this evidence.

Ajay Desai
6 January 2021

[9] Council Officer's Report, paragraph 253.