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20 December 2021

Ref: 13056

Ms Keiley Hunter
Keiley Hunter Planning
COFFS HARBOUR NSW 2450

Dear Keiley

PLANNING PROPOSAL – RR_2021_KEMPS_001_00
LOT 35 DP 1214499 SOUTH WEST ROCKS - SALTWATER

We refer to the Record of Decision by the NSW Planning Panel dated 15 October 2021 in relation to the above re-zoning. In particular, I refer to Condition 7 copied below:

> 7. An amended version of the planning proposal is to be prepared following completion of the above studies to incorporate all reasonable and practical management and mitigation measures given in the studies. The estimated residential yield from the amended proposal is to be determined and the capacity of local water, sewerage and roads systems to accommodate this level of development is to be investigated and any upgrading requirements identified including suggested financial arrangements for provision and upgrading of infrastructure.

Development Layout:

Figure 1 shows a possible layout for the proposed re-zoned section of LOT 35. In summary, the development site is west of a proposed link road connecting Belle O'Conner Street in the south and Phillip Drive ion the North. Council envisage this to be a Collector Class Road.

The zoned area should accommodate around 120 dwellings as suggested in the development vision in Figure 1.

Figure 1 - RU2 Zone Development Vision

Water Supply

Council have undertaken a strategy for the Saltwater precinct and the area to the east to cater for the ultimate development of the area. Details are contained in Annexure A.

Council have confirmed that staging of the strategy will be timed to allow the orderly development of the Saltwater Precinct (refer email in Figure A-2).

Sewerage

Delivery System

The Saltwater Precinct proposes the use of Pressure Sewerage. Council have developed specific Policies and Procedures for such systems which are being implemented in Seabreeze Estate Stage 1, and in part of the development in the southern portion of the Saltwater Precinct.

This system will be totally separate from Council's existing delivery system which currently has capacity constraints. We understand that Council are in the process of appointing Consultants to prepare an updated strategy plan for the sewage delivery system for the Eastern half of the South West Rocks catchment.

In essence this system comprises the following elements:

- Each dwelling will have its own small package sewer pumping station. Currently Council's preferred supplier is Aquatec.
- Household sewerage will feed into this station by gravity in accordance with AS 3500.
- Each pump will be connected to a pressure main located in the Road Reserve though a boundary kit which allows the pumps to be isolated from the system should maintenance be required.
- The pressure main will follow the proposed roads and generally increase ion size depending on the number of dwellings that feed into the main. The main should vary in size from 63mm HPDE to 200mm HPDE.
- The main will run from the developed area and terminate at the inlet works to the South West Rocks Sewage Treatment Plant from there it will be treated and disposed / reused accordingly.

As such the capacity of the delivery system is not a constraint to the development of the RU2 area as the developer(s) will be providing full delivery system of its own which is independent of the Council's existing system.

Treatment Capacity

The South West Rocks Sewage Treatment plant is located to the south west of the proposed development area.

In an email from Kempsey Council to Lex Tall (current owner of the development site) copied in part in Figure B-1, Council advised:

- The capacity of the treatment plant is practically around 10,000 equivalent persons (EP).
- There are plans for expansion to around 14,000 EP.
- The current load on the plant was estimated at around 4,000 EP in 2002. The 2016 census had the population at around 4,600. We would estimate that the current population would be around 5,000 EP (in non- holiday periods)

The most recent sewer treatment strategy available to Council was dated May 2002 by Hunter Water Corporation. In its strategy it suggested that the ultimate capacity required for the plant was 12,000 EP. It also predicted 2021 populations 8,633 persons as the base population and 13,375 as the population in holiday times.

As can be seen , development in South West Rocks has been stagnant for many years with the current population well below the 2021 predictions.

In sizing treatment pants, there are two key criteria for sizing system elements. These are hydraulic load and biological load.

The proposed rezoning area will add an additional around 300 EP of biological load to the plant (based on 2.5 EP per dwelling).

However, because high wet weather flows do not occur in pressure sewer system, the peak hydraulic load is equivalent to only around 35 dwellings

As such, based on these reports, there would appear to be sufficient capacity on the treatment plant to cater for this development.

Notwithstanding this, we would recommend that Council update its current sewerage treatment strategy for the plant given that the growth projections used in the previous reports have not been achieved.

Traffic

The Saltwater Precinct was the subject of a detailed traffic assessment by this firm in support of the concept plan approval for the Sea Breeze Estate. The report is entitled “Saltwater – Stage 1 Traffic Management Plan – Revision 3” June 2015 prepared by de Groot & Benson Pty Ltd

It considered the full development of the Saltwater Precinct including the deferred area. The areas considered are shown in Figure C-1 in Annexure C

The report concluded that the proposed road infrastructure with upgrades proposed in the concept approval had adequate traffic capacity for the development

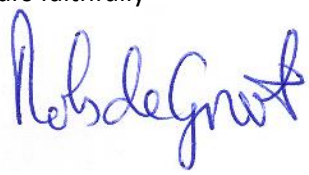
Conclusion

The rezoning of the RU2 land to a residential zoning will create additional demand for water and sewerage services and there will be additional traffic generated. In relation to these impacts:

- *Water Supply*: Council has a strategy in place for augmenting supply. Financial contributions to this would be covered by Council's Water Services Contribution Plan
- *Sewerage:* The proposed development involves a transfer system that does not rely on Council's existing system and as such will be totally funded by the developer. The treatment plant appears to still have capacity based on the most recent reports. Notwithstanding this, recently there has been quite a number of new developments commenced in the area and we would recommend that Council update its sewerage strategy based on this growth.
- *Traffic:* The traffic studies undertaken as part of the Saltwater Estate Concept Approval concluded that, with upgrades required by the approval, the road system would perform satisfactorily. No specific additional works are required outside the footprint of the rezoning area.

In my opinion, the masterplan layout as shown in the Planning Proposal is feasible in terms of water and sewer servicing and will not increase traffic movements to the degree where the existing and proposed public road network exceed their level of service.

Yours faithfully



R J de Groot BE (Civil) Hons MIEAust

CONSULTANT

ANNEXURE A – Water Supply

Council have indicated that there is adequate capacity in the water supply system to cater for the development, given the time span that full development might take to occur.

Council have developed a long term strategy to supply the whole Saltwater development. The plan is shown on Figure A.1. Essentially the long term plan to supply the Saltwater area is with a 250mm watermain connected from the south from the Gregory Street Reservoir. The plan shows three watermains within the site – notated as Trunk mains D, E and F. The following sizes are indicated:

Trunkmain	Required Diameter	Equivalent size to be funded by developer. Balance of cost to be funded by Council
D	250 mm	150mm
E	250 mm	150mm
F	200 mm	150mm

It is noted that Main "F" on the figure runs through the proposed rezoning area. Council's confirmation of its future strategy for water supply and its budgeting, is confirmed in the email contained in Figure A-2

Generally, the internal mains are proposed as 100mm. Larger mains will be provided on a cost sharing arrangement with Council in accordance with the approved strategy.

Discussions have been held with Council as to the timing of the connection from the south. Our understanding is that there is capacity in the existing reticulation in Philip Drive and Waianbar Ave to supply Stage 1. However, the adequacy of the supply beyond this will require modelling to determine appropriate staging options as it is impacted on by the levels of surrounding development (eg Malbec to the south and other possible developments along Phillip Drive).

It is noted that the water services will be generally located within 1m of the surface and as such will not impact on groundwater.

Concept plans for recycled water are shown on Drawing 13056-DA13 and MP6.

Our understanding is that Council will be bringing recycled water to the development when it builds the water supply connection from the south. In the interim, the recycled water mains will be cross connected with the potable water mains.

It is noted that the recycled water services will be generally located within 1m of the surface and as such will not impact on groundwater

Figure A.1 – Water Supply Works

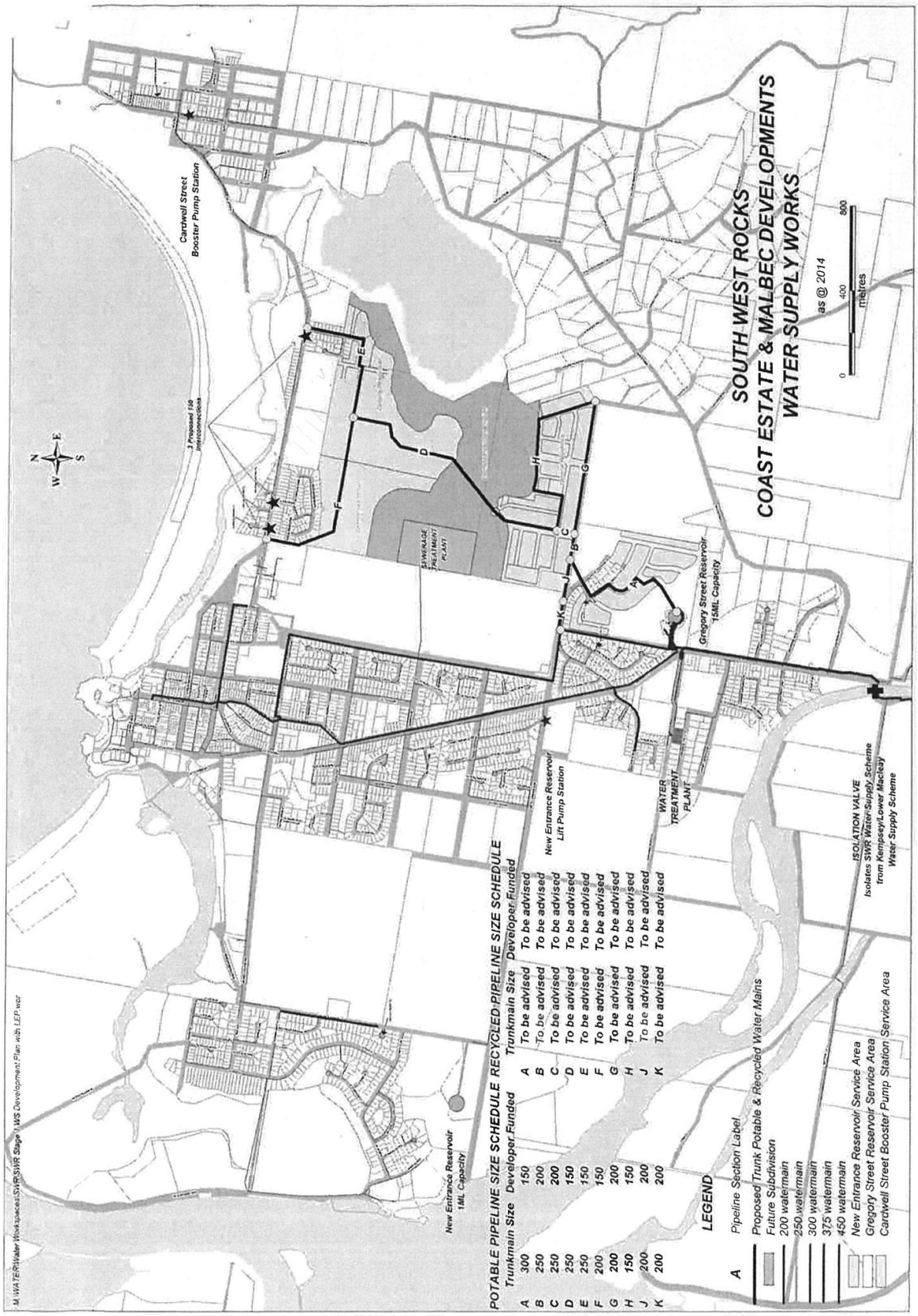


Figure A-2 – Council Confirmation of Strategy – Email from Anne Maree Burke dated 20/11/2017

From: Anne-Maree.Burke@kempsey.nsw.gov.au Anne-Maree.Burke@kempsey.nsw.gov.au
Sent: Monday, 20 November 2017 5:33 PM
To: Rob de Groot rob@dgb.com.au
Cc: records@kempsey.nsw.gov.au; Erin.Fuller@kempsey.nsw.gov.au; Geoff.Metcalfe@kempsey.nsw.gov.au

Subject: RE: Saltwater Development, Waianbar Ave, South West Rocks - Strategic Water and Sewerage Services to the site

Hello Rob,

The questions you have posed have been under review with the following outcomes.

Water supply strategic works
The South West Rocks eastern water supply trunk main appears within Council's long term budget progressively over the upcoming multiple years with the intention to enable part funding with the respective developments. The form of that partnering, whether works in kind or VPA or something similar, is to be determined with each development.

Comments on the Engineering Issues Statement - Revision 4

- It is noted that a previous performance test was undertaken in 2015 and an assessment has been completed using this information. Current performance test information would be preferable and Council can provide such tests at $312.45 per test
- Minimum residual pressure in new development areas is 15m and it is preferable to be higher. It is expected residual pressure below 20m would be considered as limiting by most residents.
- The alignment of the trunk main within the subdivision staging needs to be discussed in further detail as the depictions of the trunk main in 13056 is not necessarily preferred.

Sewerage
In principle, a direct connection to the inlet works of a pressure sewer system is acceptable. The details of this connection need to be further discussed and investigations into the linkage has commenced within Council to determine how the direct connection could best occur.

Council's Pressure sewer policy 3.2.8 was adopted in May 2017 and is available at Council's website http://www.kempsey.nsw.gov.au/corporate/policies/procedure-3-02-08-pressure-sewerage-systems.html The placement of the pump stations on each house lot will need to comply with the policy. In MP5, there appears to be some minor concerns in Stage 1 and the details of Stage 2 and 3 require some review.

Anne-Maree Burke
Manager Water Strategy
Kempsey Shire Council

ANNEXURE B – Sewerage

Figure B-1 – Extract from email from Robert Scott (KSC) to Lex Tall -0/03/2014

From: Robert Scott <Robert.Scott@kempsey.nsw.gov.au>
Subject: Saltwater Development - Future STP Expansion & Odour Assessment
Date: 6 March 2014 3:11:30 pm AEST
To: Alexander Tall <lex@swrd.com.au>
Cc: Liz Campbell <Liz.Campbell@kempsey.nsw.gov.au>, MacDonald Steve <stvnrmacdonald@gmail.com>, Anne Maree Burke <annemaree.burke@kempsey.nsw.gov.au>, Robert Pitt <robert.pitt@kempsey.nsw.gov.au>, ~Records <~Records@kempsey.nsw.gov.au>, Georgia Rayner <Georgia.Rayner@kempsey.nsw.gov.au>

Hi Lex,

I have had the opportunity to trawl back through some information from past reports in order to answer this query. I hope I've avoided getting too technical.

There are some reports from the late 1990's relative to this issue, however in 2002 Council received a report regarding the need to augment the treatment process. The old plant (pasveer channel) has a capacity of 6000 Equivalent Persons (EP) and whilst the population demand in 2002 was estimated at 4200EP it was projected that the population would exceed the plant capacity by 2010 (I don't think there has been much growth to reach this point even now). The more pressing factor at the time was the holiday loading which saw the plant overloaded in peak holiday season already (in 2002).

In 2006 Council had a report on the strategy for augmentation of the plant which led to the construction in 2009/2010 of 2 new Sequential Batch Reactors (SBR's) with a capacity of 4000EP, giving the whole plant a capacity of 10,000EP or thereabouts. In reality it wouldn't be that high as we could never run the pasveers at full capacity and meet the effluent license conditions.

Both reports list the ultimate capacity required at 12000EP hence the need at some point in time to duplicate the current SBR's, which would theoretically give 14,000EP (if operation of the pasveers was to continue and be at full capacity).

At present we bring one of the pasveer channels online for an extended period over the summer months and if we need to over the holidays we would bring a second and/or a third one back online until the SBR duplication occurs when we would probably be able to go back to just one in the peak. In the meantime until we need all three pasveers, we are able to use one of the pasveer channels as a temporary sludge lagoon to satisfy the solids handling needs. This has deferred the need to build one of the two new sludge lagoons recommended in both the 2002 & 2006 reports.

Ultimately we will need to build the two new sludge lagoons and the duplicate SBR's to get to the ultimate population figures used so far. The final step in augmenting the plant would be to construct a further 2 SBR's to allow the pasveers to be decommissioned. The thought then would be to utilise the pasveers as wet weather storage (which we do from time to time now anyway) and ultimately to cover any final effluent polishing we need to enable us to meet tightening license criteria which apply at the time. Basically we are in a staged process of periodic upgrading to get to the ultimate plant size so that we don't have infrastructure which is not really needed just sitting there.

I can find some discussion during development of the odour report about then ultimate development of the site however the addendum report in 2009 only considers the situation with two new SBR's. It doesn't appear that this ultimate demand has been considered as far as the Odour assessments go. It is my view that in the interests of getting the resolution of this issue right the assessment and modelling should be reviewed to account for the long term site plans. Obviously this is not something which should now be left to the developer & I consider this clearly to be Council's responsibility to now resolve. We can also resolve the remaining technical issues at the same time,

producing one clear final report.

I have spoke to SKM who did the original studies and discussed some of the issues. They indicated that they could revise and update the report in a timeframe of 1-2 months from acceptance of a fee proposal & we are now

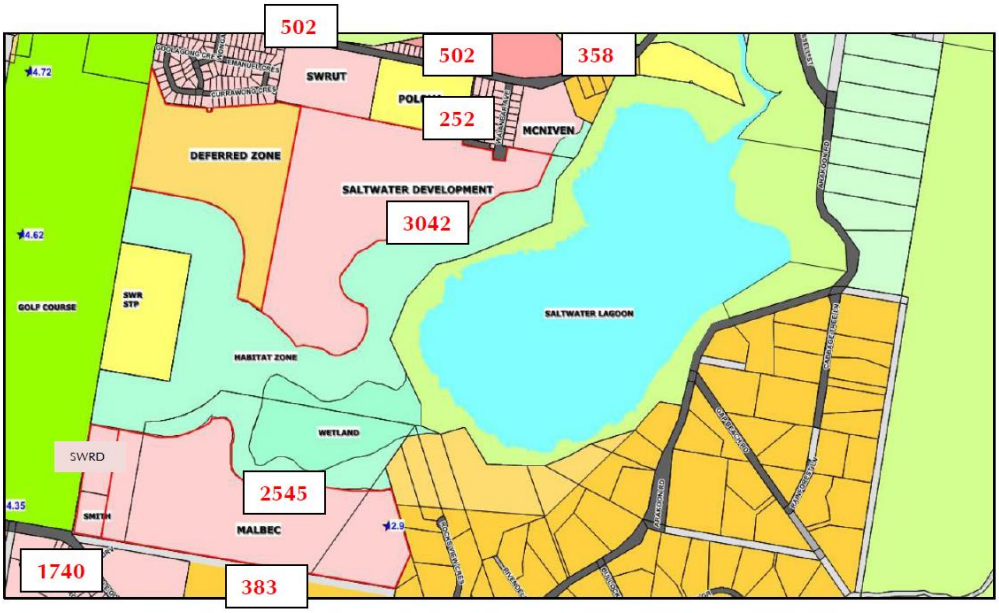
ANNEXURE C – Traffic

Figure C-1 – Extract from Figure 4.2 of Traffic Study – "Saltwater – Stage 1 Traffic Management Plan – Revision 3" June 2015

Table 4.2 AADT Traffic volumes by Development (veh/day)

SALTWATER PRECINCT - TRAFFIC GENERATION				
DEVELOPMENT	Low Density	Medium Density	Total	AADT
	No of Lots	*No of units*	*No*	*veh/day*
Northern Precinct				
SALTWATER (inc Deferred Area)	**338**	**0**	**338**	**3042**
Existing Waianbar Ave	**28**	**0**	**28**	**252**
SW RUT	37	26	63	502
POLOVA T	37	26	63	502
McNIVEN	34	8	42	358
Sub Total				*4656*
Southern Precinct				
MALBEC PA	238	62	300	2545
MAJESTICA	36	9	45	382
SEASCAPE GROVE	163	42	205	1740
Sub Total				*4667*
TOTAL	**911**	**173**	**1084**	**9323**

Figure 4.1 AADT Traffic volumes by Development (veh/day)



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2 May 2022

Ref: 13056

Ms Keiley Hunter
Keiley Hunter Planning
COFFS HARBOUR NSW 2450

Dear Keiley

PLANNING PROPOSAL – RR_2021_KEMPS_001_00
LOT 35 DP 1214499 SOUTH WEST ROCKS - SALTWATER

We refer to the Record of Decision by the NSW Planning Panel dated 15 October 2021 in relation to the above re-zoning. In particular, I refer to Condition 7 copied below:

> 7. An amended version of the planning proposal is to be prepared following completion of the above studies to incorporate all reasonable and practical management and mitigation measures given in the studies. The estimated residential yield from the amended proposal is to be determined and the capacity of local water, sewerage and roads systems to accommodate this level of development is to be investigated and any upgrading requirements identified including suggested financial arrangements for provision and upgrading of infrastructure.

Further we refer to Council's email to Keiley Hunter dated 1 March 2022 and in particular the following paragraph relating to Condition No 7::

> **Condition No. 7**
> The de Groot & Benson report adequately addresses the capacity of the local road systems. However, the following requirements of this condition have not been adequately addressed:
> - Water supply infrastructure – relies on previous Council advice from 2017 which is not current. The water supply infrastructure required to service this, and nearby proposed developments has not been established and needs to be revisited. Council is currently

undertaking an Integrated Water Cycle Management (**IWCM**) review but this is not near completion.

- Sewage infrastructure – the reporting provided is based on outdated Council advice from 2014 and 2017. A sewage strategy is required that covers the Sewage Treatment Plan (STP) capacity, and sewerage reticulation infrastructure required to service SWR into the future.
- STP odour buffer – Council remains concerned about the implications of allowing residential development within 400m of the South West Rocks STP for the current and any future augmentation of this STP. Council is developing a future sewer strategy which will confirm future STP infrastructure upgrades and the necessary mitigation measures required.

Please provide your responses through the NSW planning portal. If you have any questions regarding Council's response above, please contact me to discuss

Water Supply

Council suggests that the advice on the water supply strategy dated 2017 is not current. Council's report and proposed infrastructure was undertaken only 5 years ago. Typical studies always look at an horizon of 20 to 30 years. Examination of the strategy shows that it includes the full development of the area subject to the rezoning as shown on the extract in Figure 1.

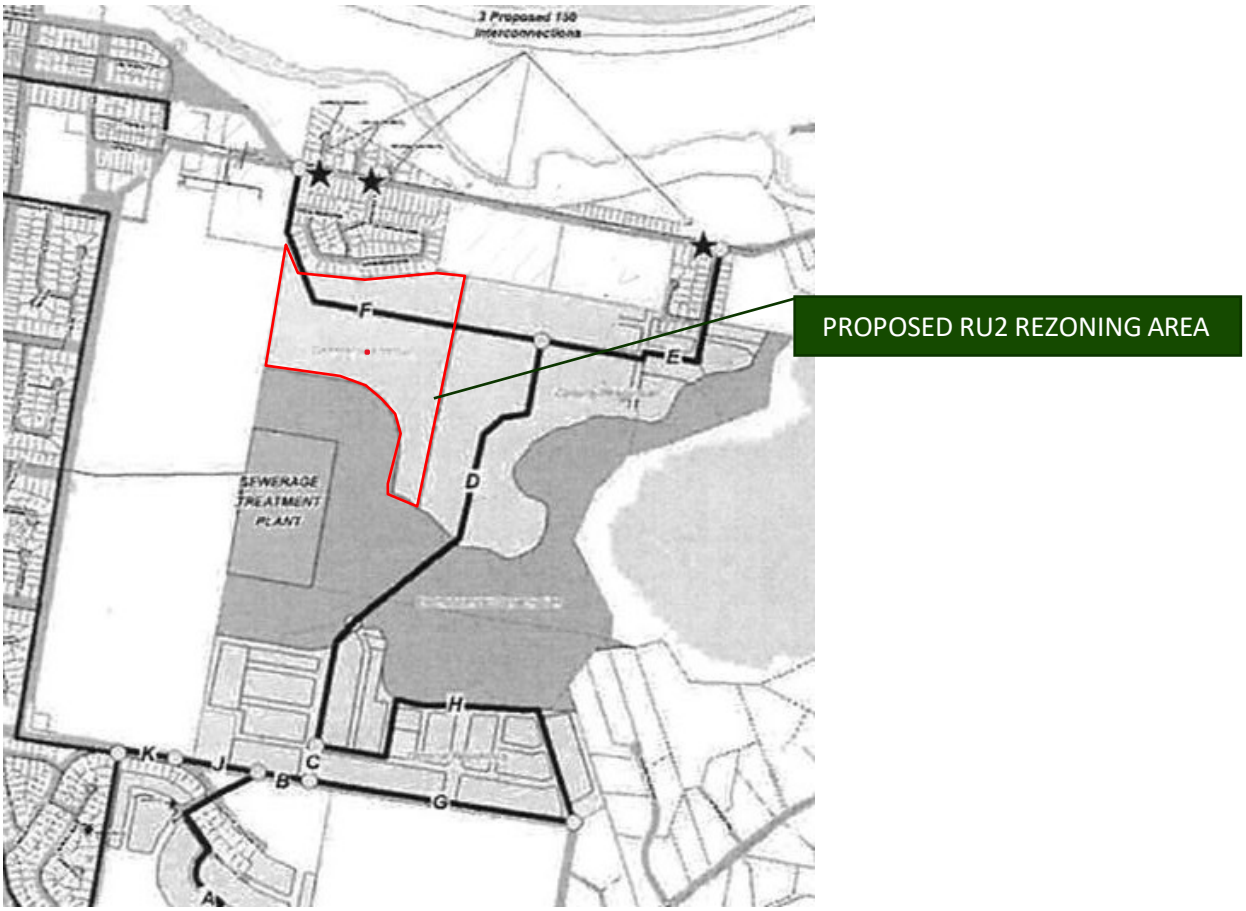

Figure 1 – Water Supply Works

We have also been advised that the works outlined in the strategy are in Council's forward budget.

As such, we contend that for the purposes of the rezoning application, there is sufficient strategic certainty about the adequacy of the water supply system to supply water to the site with augmented infrastructure as per the strategy. A copy of the strategy is contained in Annexure A.

Council have confirmed that staging of the strategy will be timed to allow the orderly development of the Saltwater Precinct (refer email in Figure A-2).

Sewerage

Again Council contend that the existing strategies for sewerage are outdated. There are two components for the sewerage system:

- The delivery system (ie transfer from a residence to the treatment plant).
- The Treatment Works capacity

Delivery System

The Saltwater Precinct proposes the use of Pressure Sewerage. Council have developed specific Policies and Procedures for such systems which are being implemented in Seabreeze Estate Stage 1, and in part of the development in the southern portion of the Saltwater Precinct.

This system will be totally separate from Council's existing delivery system.

The Planning Proposal itself which proposes an independent delivery system for raw sewage to the treatment plant for the full development of the RU2 land. As such, no additional strategy studies are required for this component of the works.

Treatment Capacity

The South West Rocks Sewage Treatment plant is located to the south west of the proposed development area.

In an email from Kempsey Council to Lex Tall (current owner of the development site) copied in part in Figure B-1, Council advised:

- The capacity of the treatment plant is practically around 10,000 equivalent persons (EP).
- There are plans for expansion to around 14,000 EP.
- The current load on the plant was estimated at around 4,000 EP in 2002. The 2016 census had the population at around 4,600. In 2022, the estimated population for the South West Rocks / Jerseyville area was 5,131 which includes unsewered areas like Arakoon. We would estimate that the current sewered population would be around 5,000 EP (in non- holiday periods). (*Reference- "South West Rocks Structure Plan, Background Paper, 17 January 2022).*

The most recent sewer treatment strategy available to Council was dated May 2002 by Hunter Water Corporation. In its strategy it suggested that the ultimate capacity required for the plant was 12,000 EP. It

also predicted 2021 populations 8,633 persons as the base population and 13,375 as the population in holiday times.

As can be seen, development in South West Rocks has been stagnant for many years with the current population well below the 2021 predictions.

As such, the likely increased loads resulting from the re-zoning are within the planning horizon of the current strategies.

As such, no further strategy is required to specifically cater for the proposed re-zoning.

In sizing treatment pants, there are two key criteria for sizing system elements. These are hydraulic load and biological load.

The proposed rezoning area will add an additional around 300 EP of biological load to the plant (based on 2.5 EP per dwelling).

However, because high wet weather flows do not occur in pressure sewer system, the peak hydraulic load is equivalent to only around 35 dwellings

As such, based on these reports, there would appear to be sufficient capacity on the treatment plant to cater for this development.

Conclusion

The rezoning of the RU2 land to a residential zoning will create additional demand for water and sewerage services. In additional, there will be additional traffic generated. In relation to these impacts:

- *Water Supply*: Council has a strategy in place for augmenting supply. Financial contributions to this would be covered by Council's Water Services Contribution Plan
- *Sewerage Transport System:* The proposed development involves a transfer system that does not rely on Council's existing system and as such will be totally funded by eth developer.
- *Sewerage Treatment System –* The additional load from the rezoning of the RU2 land is within the planning horizon of the current strategy as advised by Council and the treatment plant appears to still have capacity to cater for the proposed re-zoning based on the most recent reports.

As stated earlier, there is sufficient servicing capacity to cater for demand resulting from the proposed rezoning. Public road infrastructure is available to the site to accommodate additional traffic generated.

Yours faithfully

R J de Groot BE (Civil) Hons MIEAust
CONSULTANT

ANNEXURE A – Water Supply

Council have indicated that there is adequate capacity in the water supply system to cater for the development, given the time span that full development might take to occur.

Council have developed a long term strategy to supply the whole Saltwater development. The plan is showmen on Figure A.1. Essentially the long term plan to supply the Saltwater area is with a 250mm watermain connected from the south from the Gregory Street Reservoir. The plan shows three watermain within the site – notated as Trunk mains D, E and F. The following sizes are indicated:

Trunkmain	Required Diameter	Equivalent size to be funded by developer. Balance of cost to be funded by Council
D	250 mm	150mm
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It is noted that Main "F" on the figure runs through the proposed rezoning area. Council's confirmation of its future strategy for water supply and its budgeting, is confirm in the email contained in Figure A-2

Generally, the internal mains are proposed as 100mm. Larger mains will be provided on a cost sharing arrangement with Council in accordance with the approved strategy.

Discussions have been held with Council as to the timing of the connection from the south. Our understanding is that there is capacity in the existing reticulation in Philip Drive and Waianbar Ave to supply Stage 1. However, the adequacy of the supply beyond this will require modelling to determine appropriate staging options as it is impacted on by the levels of surrounding development (eg Malbec to the south and other possible developments along Phillip Drive).

It is noted that the water services will be generally located within 1m of the surface and as such will not impact on groundwater.

Concept plans for recycled water are shown on Drawing 13056-DA13 and MP6.

Our understanding is that Council will be bringing recycled water to the development when it builds the water supply connection from the south. In the interim, the recycled water mains will be cross connected with the potable water mains.

It is noted that the recycled water services will be generally located within 1m of the surface and as such will not impact on groundwater

Figure A.1 – Water Supply Works

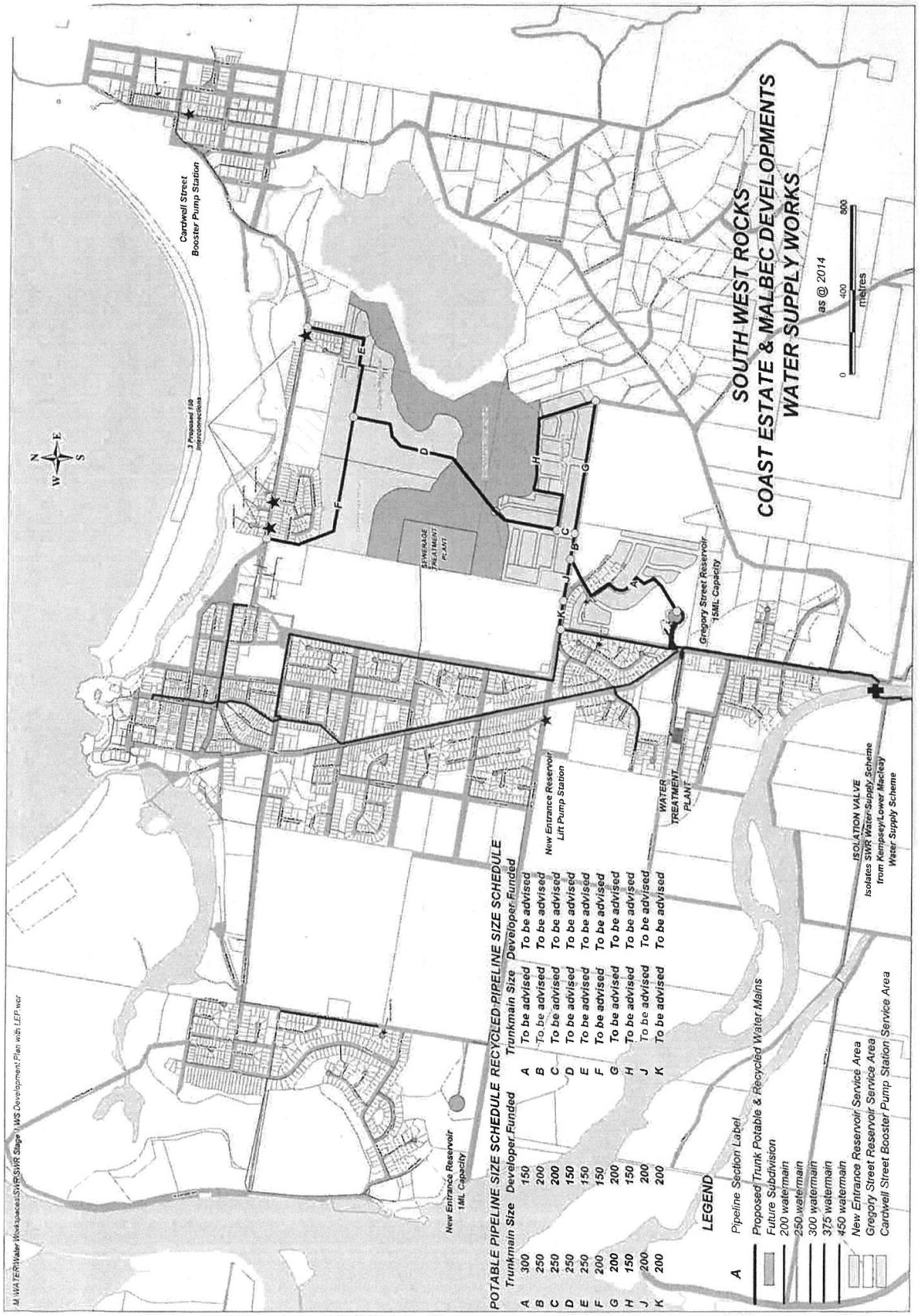

Figure A-2 – Council Confirmation of Strategy – Email from Anne Maree Burke dated 20/11/2017

From: Anne-Maree.Burke@kempsey.nsw.gov.au Anne-Maree.Burke@kempsey.nsw.gov.au
Sent: Monday, 20 November 2017 5:33 PM
To: Rob de Groot rob@dgb.com.au
Cc: records@kempsey.nsw.gov.au; Erin.Fuller@kempsey.nsw.gov.au; Geoff.Metcalfe@kempsey.nsw.gov.au

Subject: RE: Saltwater Development, Waianbar Ave, South West Rocks - Strategic Water and Sewerage Services to the site

Hello Rob,

The questions you have posed have been under review with the following outcomes.

Water supply strategic works

The South West Rocks eastern water supply trunk main appears within Council's long term budget progressively over the upcoming multiple years with the intention to enable part funding with the respective developments. The form of that partnering, whether works in kind or VPA or something similar, is to be determined with each development.

Comments on the Engineering Issues Statement - Revision 4

- It is noted that a previous performance test was undertaken in 2015 and an assessment has been completed using this information. Current performance test information would be preferable and Council can provide such tests at $312.45 per test
- Minimum residual pressure in new development areas is 15m and it is preferable to be higher. It is expected residual pressure below 20m would be considered as limiting by most residents.
- The alignment of the trunk main within the subdivision staging needs to be discussed in further detail as the depictions of the trunk main in 13056 is not necessarily preferred.

Sewerage

In principle, a direct connection to the inlet works of a pressure sewer system is acceptable. The details of this connection need to be further discussed and investigations into the linkage has commenced within Council to determine how the direct connection could best occur.

Council's Pressure sewer policy 3.2.8 was adopted in May 2017 and is available at Council's website http://www.kempsey.nsw.gov.au/corporate/policies/procedure-3-02-08-pressure-sewerage-systems.html The placement of the pump stations on each house lot will need to comply with the policy. In MP5, there appears to be some minor concerns in Stage 1 and the details of Stage 2 and 3 require some review.

Anne-Maree Burke
Manager Water Strategy
Kempsey Shire Council

ANNEXURE B – Sewerage

Figure B-1 – Extract from email from Robert Scott (KSC) to Lex Tall -0/03/2014

From: Robert Scott <Robert.Scott@kempsey.nsw.gov.au>
Subject: Saltwater Development - Future STP Expansion & Odour Assessment
Date: 6 March 2014 3:11:30 pm AEST
To: Alexander Tall <lex@swrd.com.au>
Cc: Liz Campbell <Liz.Campbell@kempsey.nsw.gov.au>, MacDonald Steve <stvnrmacdonald@gmail.com>, Anne Maree Burke <annemaree.burke@kempsey.nsw.gov.au>, Robert Pitt <robert.pitt@kempsey.nsw.gov.au>, ~Records <~Records@kempsey.nsw.gov.au>, Georgia Rayner <Georgia.Rayner@kempsey.nsw.gov.au>

Hi Lex,

I have had the opportunity to trawl back through some information from past reports in order to answer this query. I hope I've avoided getting too technical.

There are some reports from the late 1990's relative to this issue, however in 2002 Council received a report regarding the need to augment the treatment process. The old plant (pasveer channel) has a capacity of 6000 Equivalent Persons (EP) and whilst the population demand in 2002 was estimated at 4200EP it was projected that the population would exceed the plant capacity by 2010 (I don't think there has been much growth to reach this point even now). The more pressing factor at the time was the holiday loading which saw the plant overloaded in peak holiday season already (in 2002).

In 2006 Council had a report on the strategy for augmentation of the plant which led to the construction in 2009/2010 of 2 new Sequential Batch Reactors (SBR's) with a capacity of 4000EP, giving the whole plant a capacity of 10,000EP or thereabouts. In reality it wouldn't be that high as we could never run the pasveers at full capacity and meet the effluent license conditions.

Both reports list the ultimate capacity required at 12000EP hence the need at some point in time to duplicate the current SBR's, which would theoretically give 14,000EP (if operation of the pasveers was to continue and be at full capacity).

At present we bring one of the pasveer channels online for an extended period over the summer months and if we need to over the holidays we would bring a second and/or a third one back online until the SBR duplication occurs when we would probably be able to go back to just one in the peak. In the meantime until we need all three pasveers, we are able to use one of the pasveer channels as a temporary sludge lagoon to satisfy the solids handling needs. This has deferred the need to build one of the two new sludge lagoons recommended in both the 2002 & 2006 reports.

Ultimately we will need to build the two new sludge lagoons and the duplicate SBR's to get to the ultimate population figures used so far. The final step in augmenting the plant would be to construct a further 2 SBR's to allow the pasveers to be decommissioned. The thought then would be to utilise the pasveers as wet weather storage (which we do from time to time now anyway) and ultimately to cover any final effluent polishing we need to enable us to meet tightening license criteria which apply at the time. Basically we are in a staged process of periodic upgrading to get to the ultimate plant size so that we don't have infrastructure which is not really needed just sitting there.

I can find some discussion during development of the odour report about then ultimate development of the site however the addendum report in 2009 only considers the situation with two new SBR's. It doesn't appear that this ultimate demand has been considered as far as the Odour assessments go. It is my view that in the interests of getting the resolution of this issue right the assessment and modelling should be reviewed to account for the long term site plans. Obviously this is not something which should now be left to the developer & I consider this clearly to be Council's responsibility to now resolve. We can also resolve the remaining technical issues at the same time,

producing one clear final report.

I have spoke to SKM who did the original studies and discussed some of the issues. They indicated that they could revise and update the report in a timeframe of 1-2 months from acceptance of a fee proposal & we are now