Appendix 12

Government Agency Consultation Records

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State Government Agency Consultation Record

Department of Climate Change, Energy, the Environment and Water - Conservation Programs, Heritage and Regulation

RAMBOLL

ENVIRONMENT
& HEALTH

Department of Planning and Environment
Biodiversity Conservation Division
Locked Bag 914
Coffs Harbour
Attention: Ian Gaskell
ian.gaskell@environment.nsw.gov.au

Date 11/12/2023

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://www.ramboll.com/

Stuarts Point Sewerage Scheme project

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to Figure 1 in Attachment 1).

The proposed project will consist of the installation of a pressure sewerage network ultimately for approximately 1,500 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of 5,345 Equivalent Persons (EP) located to the south of the Stuarts Point township.

The project will include disposal of the treated effluent in the narrow dune system between the Pacific Ocean and Macleay Arm to the northeast of Stuarts Point.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems.

Additionally, the area is in a desirable coastal / estuarine position and includes large areas of appropriately zoned lands (RU5 Village in the *Kempsey Local Environmental Plan 2013*). The construction of a centralised sewerage scheme will remove major constraints to development and promote economic growth and residential development opportunities within the area.

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

The capital investment value of the project is valued at over $30 million and considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *State Environmental Planning Policy (Planning Systems 2021)* (Planning Systems SEPP).

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The SEARs for the project were issued on 21 April 2023 with inputs from (refer to Attachment 2):

- Department of Planning and Environment – Biodiversity and Conservation Division (BCD)
- Department of Primary Industries – Fisheries (DPI – Fisheries)
- Department of Primary Industries – Agriculture (DPI – Agriculture)
- Fire and Rescue NSW (FRNSW)
- Department of Planning and Environment – Water (DPE Water)
- Environment Protection Authority (EPA)
- Transport for NSW (TfNSW)
- Heritage NSW
- NSW State Emergency Service (SES)
- Water NSW
- NSW Rural Fire Service (NSW RFS).

As required by the SEARs, consultation with the Biodiversity Conservation Division (BCD) is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The proposed Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach (the SPSS localities). The communities comprising the SPSS localities currently rely on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- pressure sewer network
- property collection system
- Stuarts Point WWTP
- effluent transfer pipeline
- effluent disposal area.

The objectives of the project are to:

- provide sewerage infrastructure for the existing residents of SPSS localities
- support and facilitate the planned future residential development across Stuarts Point, Fishermans Reach and Grassy Head
- reduce environmental impacts associated with sewerage management
- eliminate odours and water quality issues associated with existing underperforming onsite sewerage management systems.

Key features of the project include:

- construction of approximately 21.1 kilometres of reticulated pressure pipe and associated ancillary infrastructure (flush pumps, air valves, isolation valves and boundary kits) designed for:
  - transfer of loads up to 1,025 kilolitres per day under average dry weather flow (ADWF) conditions
  - an estimate peak population of 5,345 persons

- mechanical and electrical fit out of the WWTP, including:
  - inlet works
  - intermittently decanted extended aeration (IEDA) biological treatment process
  - IDEA effluent pump station
  - provision for future effluent filtration
  - UV disinfection
  - effluent disposal pump station
  - sludge storage tanks
  - mobile sludge dewatering area
  - chemical storage and dosing
  - odour management
  - foul water pump station
- ongoing maintenance activities including inspections, monitoring and repairs as required
- effluent transfer proposed as a trenchless crossing involving horizontal directional drilling (HDD) through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm
- effluent disposal in the dunal area on the eastern area of the Macleay Arm including a short section of riser pipe to bring effluent to the surface to allow surface discharges onto a small area of riprap before flowing onto the ground
- decommissioning of existing redundant on-site sewage management systems including:
  - off-site disposal of the contents of existing on-site treatment systems
- permanent onsite ancillary infrastructure
  - at the WWTP including:
    - staff office
    - operations and control room
    - meeting facilities and staff amenities
    - sealed site road and paths
    - electrical works
    - permanent lighting
    - CCTV
    - security fencing
    - vegetation screen and landscaping
  - security fencing and signage indicating unauthorised access at the effluent disposal area
- temporary construction infrastructure including:
  - site and worker's compound including site parking, office and amenities
  - laydown areas
  - stockpile areas
  - drill pad launch areas
  - temporary fencing.

A maximum five metres buffer has been applied to the sewerage collection system route in which any disturbance associated with the project would be limited (refer to Figure 1 in Attachment 1). This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Construction of the project would involve trenchless underground boring for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence early 2025 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

The operational lifespan of the project is approximately 50 years. Components of the project will remain in operation until they are either upgraded or become redundant. Prior to decommissioning, a net environmental benefit analysis (NEBA) (or similar) would be undertaken to determine the most appropriate approach to decommissioning and would consider the environmental impacts of removal of the rising main versus the potential benefits of leaving the facilities in-situ.

Key issues for your consideration

The EIS will consider potential impacts to the existing hydrological functioning of the mapped coastal wetlands (vegetation removal, flooding and activation of acid sulfate soils) including how the proposed effluent disposal area will be accessed during the construction and operational phases of the project.

Construction of the project will involve trenchless underground boring for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. This will allow for minimisation of surface disturbance and avoidance of identified ecological and cultural constraints, particularly in areas where threatened ecological communities, native vegetation and sensitive areas have been identified within the project footprint.

A biodiversity development assessment report (BDAR) will be prepared for the project and will include assessment of potential impacts to threatened ecological communities and native vegetation.

With reference to matters requested by DPI Fisheries to be included in SEARs, we would also like to confirm agreement with BCD that impacts to aquatic ecology will be avoided by the project with consideration to the described construction methodology and an aquatic ecology assessment will not need to be prepared for the project.

A land use conflict risk assessment (LUCRA) will be prepared as part of the EIS. This study will consider the potential impacts of the project on the environmentally and culturally sensitive land reserved in proximity to the scheme and will include assessment of direct and indirect impacts to the Clybucca Historic Site and Clybucca Aboriginal Area, Yarriabini National Park, Yarrahapinni Wetlands National Park and Fishermans Bend Nature Reserve.

The EIS will address all other matters raised in your letter dated 11 April 2023 regarding coastal processes and associated hazards and flooding as appropriate.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by 22 December 2023.

Should you wish to further discuss or provide comment please do not hesitate to contact myself on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
3184321 - Hunter IA

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Dimitri Young <Dimitri.Young@environment.nsw.gov.au>
Sent: Thursday, 17 July 2025 4:56 PM
To: Charyssa Lawrence; Ian Gaskell
Cc: Shaun Taylor; Tom Schmidt; Nicky Owner
Subject: DCCEEW CPHR Response - RE: Stuarts Point Sewerage Scheme project: Request for BCD/CHPR Input follow up
Attachments: DCCEEW CPHR Response - Stuarts Point Sewerage Scheme - SSD-56884966 - EIS Pre-Lodgement Consultation - Signed DY 17-07-2025.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Charyssa
Our response is attached.
Cheers
D

Dimitri Young
Senior Team Leader Planning North East

Conservation Programs, Heritage and Regulation
Department of Climate Change, Energy, the Environment and Water
T (02) 6659 8272 **E** dimitri.young@environment.nsw.gov.au
Locked Bag 914 (Level 8, 24 Moonee St) Coffs Harbour NSW 2450
Working days - Monday to Friday, 09:00am - 05:00pm
environment.nsw.gov.au

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Wednesday, 9 July 2025 5:20 PM
To: Ian Gaskell <ian.gaskell@environment.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>; Tom Schmidt <tom.schmidt@environment.nsw.gov.au>; Nicky Owner <Nicky.Owner@environment.nsw.gov.au>
Subject: RE: Stuarts Point Sewerage Scheme project: Request for BCD/CHPR Input follow up

Hi Ian,

Thank you for following up, I've attached the two previous emails to this email for your reference, along with a more up-to-date consultation letter than the one provided in 2023.

Essentially, the proponent, Kempsey Shire Council are experiencing pressure to meet funding deadlines to be able to deliver on the project. As such, we are in the position of needing to submit the EIS as soon as possible, including the BDAR with a small number of species with an 'assumed presence' approach. I note however, under this approach we would continue ecological survey efforts throughout the State Significant Development approval process to be able to address and close out any 'assumed presence' species later on during the Response to Submissions and/or Amendment Report.

This approach has been discussed with the Department of Planning, Housing and Infrastructure (DPHI), who have agreed in principle to this approach, but have asked that we consult with CHPR to get their concurrence. As such I

would appreciate if you could please provide a list of available dates and times for a CHPR DCCEEW representative to hold a meeting to discuss the project and BDAR with our project ecologists and Kempsey Shire Council.

We would be happy to discuss the work undertaken to date with CHPR, our project ecologists have spent over 400 hours in survey efforts over the Stuarts Point Sewerage Scheme site since early 2024, including four rounds of targeted flora surveys, spring diurnal bird surveys, Koala SATs, March Anabat surveys, as well as deployed 43 remote cameras for terrestrial and arboreal mammals detection.

Thanks Ian and I look forward to discussing the matter further. Please get in touch with myself on the details below if I can provide any further details.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
https://www.ramboll.com/

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ABN 49 095 437 442

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From: Ian Gaskell <ian.gaskell@environment.nsw.gov.au>
Sent: Wednesday, 9 July 2025 3:46 PM
To: Charyssa Lawrence <CLAWRENCE@ramboll.com>; NPWS Area Mailbox - Hastings Macleay <npws.hastingsmacleay@environment.nsw.gov.au>; NPWS Parks Info Mailbox <parks.info@environment.nsw.gov.au>; CPHR RD Hunter Central Coast Mailbox <huntercentralcoast@environment.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>; Tom Schmidt <tom.schmidt@environment.nsw.gov.au>; Nicky Owner <Nicky.Owner@environment.nsw.gov.au>
Subject: RE: Stuarts Point Sewerage Scheme project: Request for BCD/CHPR Input follow up

Hi Charyssa,

Not sure what has happened but I have gone back through my inbox and cannot find any emails dated 11 December 2023, 22 April 2024 or any other emails regarding the Stuarts Point Sewerage Scheme project.

It would be appreciated, if you could resend your original consultation email and any other background information you are wishing to discuss with CPHR.

CPHR would welcome the opportunity to discuss progression of the BDAR and the EIS.

Kind regards

Ian Gaskell
Senior Conservation Planning Officer Planning North East

Conservation Programs, Heritage and Regulation
Department of Climate Change, Energy, the Environment and Water
T (02) 8289 6323 **E** ian.gaskell@environment.nsw.gov.au
494 Bruxner Highway, Alstonville NSW 2477
Working days Monday to Friday, 9:00am to 5:00pm
environment.nsw.gov.au

I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Wednesday, 9 July 2025 11:33 AM
To: Ian Gaskell <ian.gaskell@environment.nsw.gov.au>; NPWS Area Mailbox - Hastings Macleay <npws.hastingsmacleay@environment.nsw.gov.au>; NPWS Parks Info Mailbox <parks.info@environment.nsw.gov.au>; CPHR RD Hunter Central Coast Mailbox <huntercentralcoast@environment.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>
Subject: FW: Stuarts Point Sewerage Scheme project: Request for BCD/CHPR Input follow up

To whom it may concern,

Ramboll have been attempting to consult with the Conservation Programs, Heritage and Regulation (CHPR) (formerly Biodiversity and Conservation division) of the Department of Climate Change, Energy, the Environment (DCCEEW) on behalf of Kempsey Shire Council on the Stuarts Point Sewerage Scheme Project. Our SEARS contact has been unable to provide a response on two occasions in 2023 and 2024. Ramboll and Kempsey Shire Council are intending to submit the Environmental Impact Statement (EIS) for the project to the Department of Planning Housing, and Infrastructure (DPHI) in August 2025.

Would you please be able to confirm an appropriate contact for our EIS CHPR consultation? Ramboll have been progressing with the Biodiversity Development Assessment Report (BDAR) for the project and wish to hold a meeting with the CHPR DCCEEW representatives to discuss the submission of the BDAR and EIS.

Thank you in advance and please feel free to contact myself on the details below,

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
https://www.ramboll.com/

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From: Tawna Krause <TKRAUSE@ramboll.com>
Sent: Monday, 22 April 2024 3:05 PM
To: ian.gaskell@environment.nsw.gov.au
Cc: Shaun Taylor <staylor@ramboll.com>; Charyssa Lawrence <CLAWRENCE@ramboll.com>
Subject: Stuarts Point Sewerage Scheme project: Request for BCD Input follow up

Hi Ian,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

We have previously tried to consult with DCCEEW – Biodiversity and Conservation Division (BCD) concerning the Stuarts Point Sewerage Scheme Project. Our initial consultation, see **attached email**, was provided on 11 December 2023, and has not been received with a response to date. Could you please confirm you have received the letter and provide an estimated timeframe of your response in accordance with below.

It is requested that you please provide feedback by **13 May 2024**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Thanks,

Tawna Krause

B. Env. Sci and Mgmt
Senior Environmental Planner
IA

D +61 2 9954 8176
tkrause@ramboll.com

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

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Department of Climate Change, Energy, the Environment and Water

Your ref: SSD - 56884966
Our ref: DOC25/566817-2

Ramboll
The Arc, 45a Watt St
NEWCASTLE NSW 2300

Attention: Ms Charyssa Lawrence

Dear Ms Lawrence

RE: Consultation Request - Stuarts Point Sewerage Scheme, Kempsey Shire (SSD - 56884966)

Thank you for your email dated 9 July 2025 about the proposed Stuarts Point Sewage Scheme seeking comments from the Conservation Programs, Heritage and Regulation Group (CPHR) of the NSW Department of Climate Change, Energy, the Environment and Water. I appreciate the opportunity to provide input and apologise for the delay in responding to those requests.

CPHR has responsibilities relating to biodiversity (including threatened species and ecological communities, or their habitats), flooding, and coastal processes and associated hazards, and provides comment on issues affecting National Parks and Wildlife Service estate.

We understand your request seeks to fulfill pre-lodgement consultation for the preparation of an Environmental Impact Statement (EIS) required by the Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning, Housing and Infrastructure (DPHI).

CPHR previously provided SEARs for this project to DPHI in our letter dated 14 April 2023. We have no further requirements to add to these SEARs at this point in the application process.

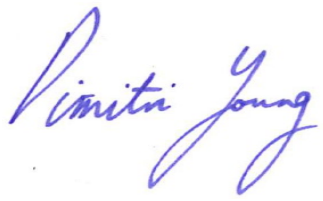
CPHR understands due to project funding deadlines you are required to submit the EIS to the Department by August 2025. The EIS also includes a Biodiversity Development Assessment Report (BDAR). We also understand, due to this funding deadline the BDAR will need to 'assume presence' for several threatened species and that after the lodgement of the EIS you will undertake additional targeted surveys to determine whether the assumed species occur are present.

While CPHR prefers all surveys to be completed prior to an EIS being lodged, in this instance, we are satisfied with the proposed approach given the project's time constraints and your commitment to undertake further targeted surveys prior to the application being determined. We suggest you confirm this approach is acceptable to the consent authority.

Finally, due to the proposed construction methodology, you have requested CPHR confirms an aquatic ecology assessment is not required. We are unable to comment on non-terrestrial ecology and recommend this request be forwarded to NSW Fisheries for their consideration.

If you have any further questions about this issue, please contact Mr Ian Gaskell , Senior Conservation Planning Officer North East, CPHR, on 8289 6323 or at ian.gaskell@environment.nsw.gov.au.

Yours sincerely



DIMITRI YOUNG
Senior Team Leader Planning North East
Conservation Programs, Heritage and Regulation

17 July 2025

To:	**Eric Nielsen** Water and Wastewater Program Manager Kempsey Shire Council	From:	**Rennie Ferguson** Senior Associate Project Management Beca Hunter H2O
Copy to:		Date:	15 October 2025
Subject:	Project Memo – Dunal Discharge Investigations Summary		

1.1 Introduction and Summary

The Stuarts Points Sewer Scheme has been considered since 1984 and for the intervening 40 years various bodies of work have progressed at different times with the community of the three townships of Stuarts Point, Grassy Head an Fishermans Reach frustrated at the slow progress towards development but highly anticipating its completion.

In 2018 Kempsey Shire Council resolved via Council meeting and Preliminary Business Case that the Stuarts Point Sewer Scheme would comprise a local collection system and wastewater treatment plant instead of transferring sewer to South West Rocks for treatment. The focus returned to discharging treated effluent to groundwater with the expectation that the narrow dunal system to the east of Stuarts Point township would be the preferred location of the dunal discharge.

Since 2018 a number of technical investigations have been completed, along with ongoing engagement with NSW EPA and DCCEEW, however in mid-2024, during the development of the EIS it became apparent that earlier studies had not had the full extent of focus needed to consider the feasibility of the dunal disposal site placing the project at risk of not being feasible.

With project threshold risk identified, a sequence of targeted investigations of dunal capacity, dunal discharge methods and water quality were initiated and within 10mths the feasibility of the scheme was re-confirmed and concept designs completed to allow progression on the EIS submission and confidence in project procurement.

In 2024, as part of project review the project objectives of the Stuarts Point Sewer Scheme were reconfirmed and refined as shown in Figure 1

Figure 1 Stuarts Point Project Objectives

A major outcome of review and subsequent technical investigations was the finding that because of the specifics of the site the effluent needs to be spread over the dunes in a long narrow configuration to reduce the risk of effluent seepage along Stuarts Point Beach and Macleay Reach shorelines.

This means that flood distribution / irrigation such as that used at South West Rocks is not practical at Stuarts Point as it would lead to extensive surface seepage along Stuarts Point Beach and Macleay Reach shoreline.

Due to the risk of surface seepage, a range of options for effluent management were reviewed including exfiltration basins, similar to that used at Hawks Nest STP (MidCoast Water) and Tanilba Bay WWTP (Hunter Water) where a variable depth basin is used to contain and attenuate effluent flows until it progressively exfiltrates into the aquifer below.

Of the options assessed, only two options were selected for further development to distribute effluent over a broad area, using methods commonly seen New Zealand for treated effluent disposal.

These options are detailed in the concept design documentation developed along with a detailed assessment of hydrogeological constraints.

The more commonly seen exfiltration basin option was not further development as the site characteristics necessitated a long and narrow configuration (1300m x 10m) and any depth of ponding within the basin exacerbating seepage on the Stuarts Point Beach and Macleay Reach shorelines.

The preferred option selected for further design development will distribute effluent over the existing landform and allows for discharge to be cycled over four (4) x 10m wide strips to maintain long term capacity.

1.2 Purpose

The purpose of this memo is to provide:

- summary of investigations into the discharge of treated effluent from the proposed Stuarts Point WWTP to the dunal system
- demonstrate the change from initial concept of South West Rocks “flood distribution” to the current pressure compensated drip irrigation method
- provide further information as to why other methods such as Exfiltration Basins were discounted and not developed further.
- steps taken by KSC to change focus from water quality to capacity and establish feasibility

1.3 Background

1.3.1 Stuarts Point Sewer Scheme - Project Timeline

The Stuarts Points Sewer Scheme has been considered since 1984 and for the intervening 40 years various work has progressed, a summary of the work done over that period is provided in Figure 2 below

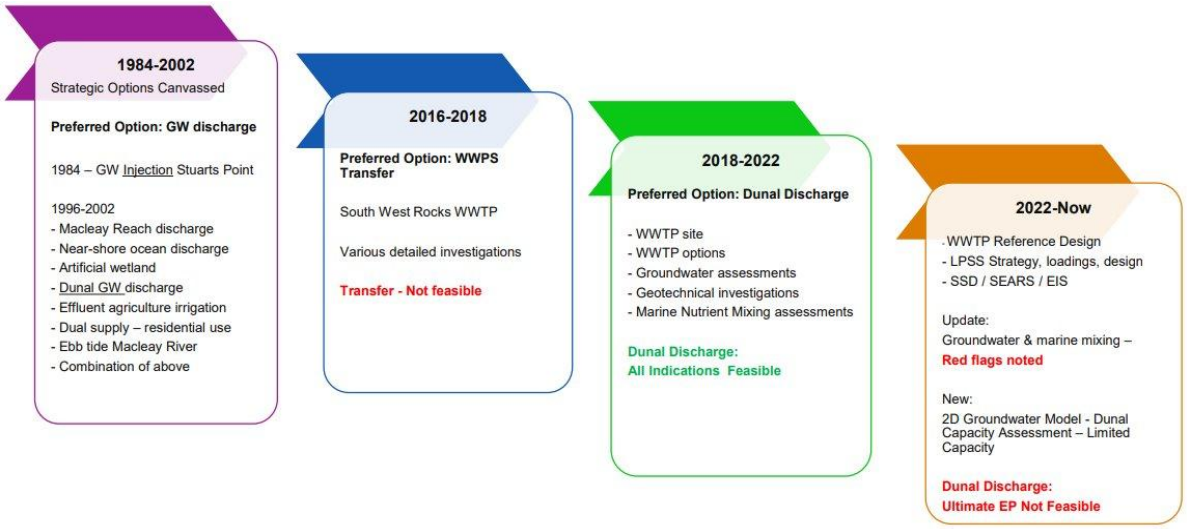


Figure 2 Stuarts Point Sewer Scheme Investigation Timeline

1.3.2 Dunal Site Investigations

Following is a summary of the investigations into discharge of treated effluent on the Stuarts Point dunal system since 2018 when the option to transfer to South West Rocks WWTP was dismissed.

Links to the full suite of investigation reports over the period is in Table 8

The following sections cover:

- history of project investigations and gaps in previous work
- steps taken by KSC to change focus from water quality to capacity and establish feasibility
- revised feasibility – sensitivity and feasibility assessment– options modelling
- establishment of dunal site constraints, design objectives
- Summary of dunal application method and dismissal of unsuitable options
- concept design - selection and development of the preferred option – slow rate drip irrigation

1.3.2.1 Feasibility and Initial Concept Design (2018- 2023)

In 2018 Kempsey Shire Council resolved via Council meeting and Preliminary Business Case that the Stuarts Point Sewer Scheme would comprise a local collection system and wastewater treatment plant instead of transferring sewer to South West Rocks for treatment. The focus returned to discharging treated effluent to groundwater with the expectation that the narrow dunal system to the east of Stuarts Point township would be the preferred location of the dunal discharge.

Council's experience of dunal discharges at Hat Head and South West Rocks along with the guidance of the NSW DCCEEW and NSW EPA had led it to prefer a discharge arrangement similar to that of South West Rocks – which would be essentially a free discharge from bell-mouthed pipework to the dunal surface and leaving the surface distribution of effluent to either the natural variations of dune topography or a more constructed and levelled surface profile. A flooded surface discharge.

The technical investigations at the time focused on generalised local and regional groundwater properties with the expectation that treated effluent would exfiltrate into the dunes and mix with the regional aquifer before moving in an eastward direction toward the ocean.

Though a conceptual groundwater model was developed showing a divide in the middle of the dune and discharging both east and west - the focus at this time as directed by the NSW EPA - was on understanding mixing of effluent within the groundwater system and the impact on the water quality of the Macleay Reach and Ocean.

The expectation was that the effluent would mix within the aquifer and achieve water quality targets.

However, GHD found that the effluent application rate dominated natural groundwater flowrates to the extent that there was an almost instantaneous transfer of effluent to the surface water bodies of the Macleay Reach and Ocean rather than mixing within the aquifer. The NSW EPA directed that mixing within the surface water bodies needed to be investigated as the assessment became one of surface water quality as opposed to groundwater.

A MIKE 3 Flexible Mesh 3D hydrodynamic mixing model of the Macleay Reach and Ocean was developed by GHD and the groundwater and effluent discharge inputs to this model included boundary conditions such that 100% of flow migrated to either the east or west.

Both the use of boundary conditions discharging 100% flows to each receiving water (east and west) and the instantaneous discharge of effluent to surface water bodies was considered conservative. The outcome of this modelling was that surface water quality targets in both the Macleay Reach and the Ocean were met within metres of the discharge point.

As a result of the conservative approach to marine mixing modelling demonstrating water quality objectives and criteria were being met – the dunal discharge was considered feasible.

Subsequently concept designs were completed for effluent transfer pipeline, Macleay Reach Crossing (HDD), geotechnical investigations and a dunal discharge arrangement similar to South West Rocks (GHD,2022)

in 2022 Kempsey Shire Council applied to the NSW Government for State Significant Development approval pathway and SEARS were issued in April 2023.

1.3.2.2 EIS Investigations - Feasibility Review (2023 – 2024)

In January 2024 KSC met with the NSW EPA to re-confirm the proposed EPL criteria and licence monitoring points and note that overall loadings of the sewer scheme had increased with subsequent minor increases in ADWF and PWWF.

As part of this consultation, it was agreed prudent that the water quality modelling (marine mixing) should be updated to reflect the new effluent volumes as well as applying the agreed changes to effluent criteria (minor increases to TP and TN)

- In February 2024 Kempsey Shire Council engaged GHD to update the marine mixing modelling to reflect these changes.
- In April 2024 Kempsey Shire Council became aware of an issue with the Bonny Hills WWTP and the NSW EPA's focus on seepage of treated effluent along Rainbow Beach.

  This awareness of seepage on Rainbow Beach prompted further review of the previous Stuarts Point investigation work, and it became apparent that no advice had been received on the physical capacity of the dunes to handle the volume of effluent proposed to be discharged. No modelling (computational or otherwise) describing the local groundwater system had been undertaken.

  There had been no previous assessment of mounding or consideration of seepage breakout either within the dunal site or along the Macleay Reach shoreline or Stuarts Point Beach.
- In May 2024 GHD indicated the potential for seepage from the discharge of treated effluent, subsequently GHD were requested to identify the areas of potential seepage.
- In June 2024 GHD advised that with the update of their 1D Groundwater model that there "*is potentially insufficient capacity within the sand aquifer to receive the effluent under average flow conditions and there is likely to be ponding, seepage and surface flow between the effluent disposal area and Macleay Arm*"
- Subsequent work between June 2024 and August 2024 it became apparent that the discharge of effluent over the area and method similar to the South West Rocks dunal site (3.8 Ha) would result in the surface breakout of treated effluent across the entire width of the dunes between Macleay Reach and Stuarts Point Beach – including the beach itself.

  Figure 3 below shows the model results of a conceptualised basin application from GHD's 1D Groundwater model

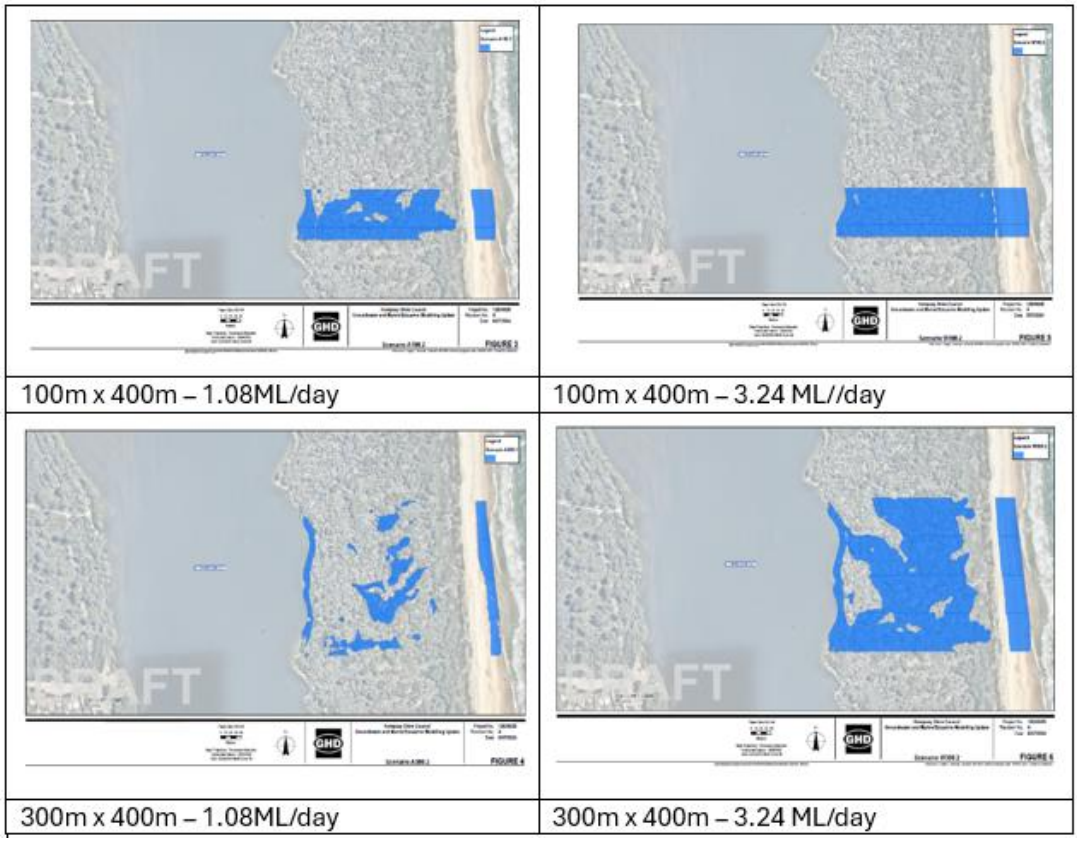


Figure 3 Representations of basin application and seepage 1D Groundwater Modelling (GHD, 2024)

As a result of internal project review the following points were noted:

- Initial project options had been based on incorrect assumptions that the effluent discharged onto the dunes would mix with groundwater and flow predominantly to the east (Ocean)
- Initial investigations found that the assumption that effluent would mix within the aquifer and meet groundwater quality targets was not correct.
- Subsequent 3D Marine Mixing modelling on Macleay Reach found that surface water quality targets were met
- No assessment of dunal site capacity to receive effluent without mounding surface breakout had been undertaken
- Updated preliminary assessment of dunal capacity found the site and adjacent beach environment would be inundated with effluent seepage during dry weather
- Further investigations were needed to understand the site characteristics and confirm feasibility

The identification that treated effluent would seep onto the shorelines is a significant concern for Kempsey Shire Council.

Council's experience in operating the South West Rocks 3.8Ha dunal site includes a high level of operational experience with ponding of treated effluent, groundwater mounding and surface breakout within the fenced area of the dunal application area, however a significant level of concern arose when it became clear that seepage of treated effluent could present in extended areas accessible and used by the public.

Stuarts Point Beach is a popular recreational destination with a high volume of 4WD use and beach fishing, the upper reaches of the Macleay Reach is used for kayaking from the nearby caravan parks and youth centres.

The Stuarts Point Sewer Scheme is intended to support the development of an additional 1000 houses with an increase in permanent population in the order of 2500 people, attracted to the recreational opportunities provided by the access to the Macleay Reach and Stuarts Point Beach from Grassy Head.

1.3.3 Feasibility Revision (2024-2025)

Sensitivity Analysis (Beca, 2024)

In August 2024 Kempsey Shire Council engaged Beca to undertake a desktop modelled sensitivity assessment using a 2D Groundwater model to test options for dunal application. A SEEP/W Model was developed based on desktop and physical data (logging, Geotech, LIDAR) obtained by GHD achieving reasonable correlation with the 6-month logged groundwater levels and Nambucca BOM station.

Conceptual scenarios were modelled of:

- Shallow Exfiltration Basin / Surface Discharge Applications – 100m wide, 50m wide and 10m wide
- Pond Applications – 1m to 4m depths
- Raised Platform Application (higher dune) – 10m wide x 300m long at 6m AHD (1v:4h slope)

Table 1 Sensitivity Assessment Outcomes (Beca, 2024)

Application Method	Dry Weather Sensitivity Assessment Summary
Shallow Exfiltration Basin / Surface Discharge	• Dune capacity without breakout only 25% of ADWF @ 300m long x 10m/50m/100m wide • The analyses indicated that increasing the width of application (from 10m to 100m as a pond/basin) over the 300m length does not materially increase capacity to dispose treated effluent. This is an effect from the narrow geometry of the dunal area • Lengthening discharge by 4 - 5 times may accommodate the ADWF without seepage breakout (i.e. 1200m long x 10m wide)
Exfiltration Ponds	• 1m to 4m deep (3m to 6m AHD) • depth of the pond increases flow into the ground but is associated with increasing levels of unacceptable uncontrolled breakout and dune flooding up to approximately 2.3mRL within the low relief topography in the centre and shorelines.
Raised Platform (higher dune)	• The discharge applied over the 10m by 300m footprint area was varied and the surface breakout established. (0.5ML/d and 1.08ML/day shown below) • application rate needs to be less than approximately 0.23ML/day over the 300m length to minimize surface breakout  Figure 4: a) 1.08ML/day design discharge applied over 300m length, results in uncontrolled breakout below ~3m AHD, b) 0.5ML/day design discharge applied over 300m length, results in uncontrolled breakout below ~2m AHD.

The SEEP/W sensitivity assessment demonstrated:

- Potential feasibility of longer narrower configuration of surface applications.
- Exfiltration ponds and higher elevation surface applications (both requiring more heavily engineered landforms) resulted in ponding and seepage breakout of effluent and were dismissed from further consideration.
- Capacity of the dunes to gravity drain the proposed total volumes of treated effluent discharge rates is not achievable over a 300m long x 150m wide footprint, even under dry conditions

Feasibility Assessment (Beca, 2025)

Confirmation of the potential feasibility required more detailed modelling based on more extensive site specific data. In December 2024 the following site investigations were completed over a representative area:

- Drilling of three (3) x 30m deep boreholes to confirm aquifer depth and properties
- Eight (8) infiltration tests in the surficial dune sands.
- Installation of two (2) x 6m deep piezometers for future logging and monitoring

2D modelling incorporating the collected site data was completed focusing on the following scenarios testing the feasibility of the narrower and wider configuration confirmed in the sensitivity analysis. The modelling looked at the following:

- Average infiltration capacity of the sand dunes with static groundwater level ~0.8 m below ground level at the disposal area.
- Modified infiltration rates due to the water table mounding over time (i.e., when groundwater levels rise in response to the infiltration discharge and reach near the ground surface but not breaching the surface)
- Applying infiltration in the groundwater model across:
    - 10 m wide discharge area
    - 40m wide discharge area
    - 50 m wide footprint - comprised of 4 x 10 m strips with space in between representing disposal areas which could be discharged simultaneously or rotated.
- Rainfall scenarios which assess the impact of rainfall on groundwater levels and soakage capacity.

Figure 4 and Figure 5 below show the conceptual groundwater model and the SEEP/W model with groundwater flow vectors during active dune disposal

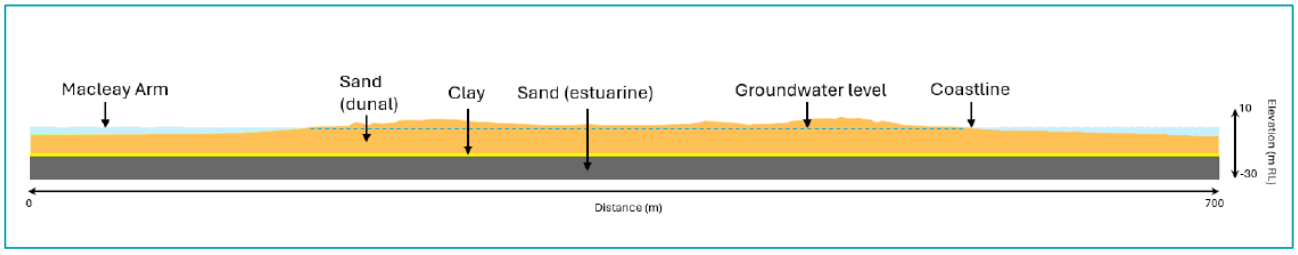


Figure 4 Conceptual ground model used in the SEEP/W model of the proposed site from west to east through the sand dune

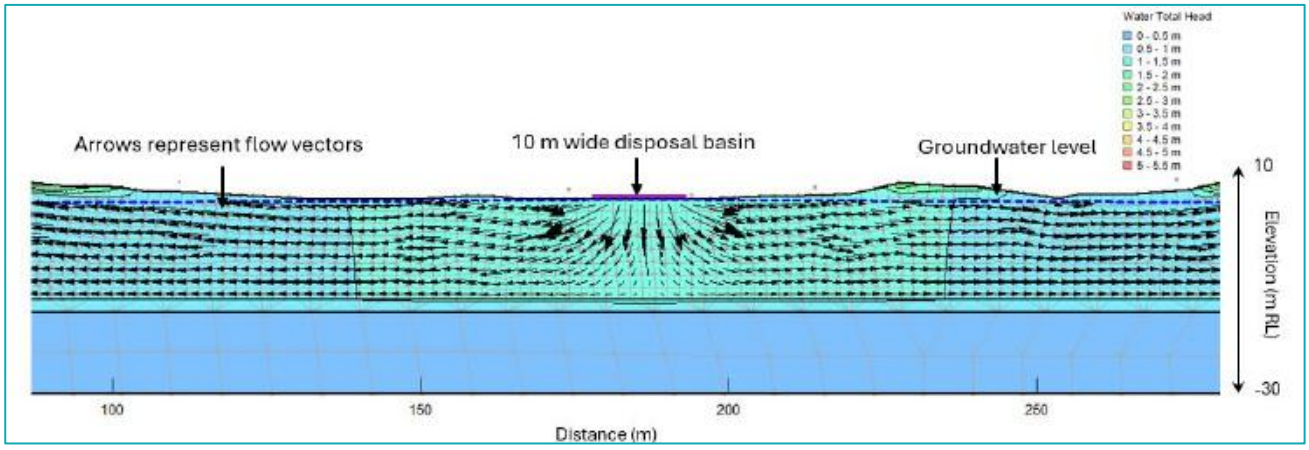


Figure 5 Screenshot of the 2D SEEP/W model showing groundwater flow vectors during active disposal to ground

Dune Infiltration Capacity

Outcomes of the more detailed modelling confirmed that when the treated effluent is applied at the surface of the dunes and allowed to infiltrate under gravity that the narrow disposal width is significantly more effective than the wider configuration to avoid surface seepage and breakout of mounded groundwater.

This constraint was related to a decrease in infiltration rates for the longer duration applications that apply to the constant daily application of treated effluent. As the groundwater levels rise (mounding) from a surface application infiltration rates reduce. This is further compounded with rainfall.

- 10 m wide disposal area both the short and long-term mounded infiltration rates were higher than when 4 x 10 m (40m) wide disposal footprints were modelled simultaneously
    - 10m wide disposal
        - initial infiltration rates are high (~135mm/hr for first 24hrs)
        - reduces quickly when groundwater has mounded (~34 mm/hr over following 5 days)
    - 40m wide simultaneous discharge
        - initial infiltration rates are high (~88 mm/hr for first 24hrs)
        - reduces quickly when groundwater has mounded (~23 mm/hr over following 5 days)
    - During prolonged wet weather the soakage capacity of the dune site will be significantly reduced. When the groundwater level reaches the surface, the infiltration capacity will be close to zero.
- Wide configurations were dismissed from further consideration

The infiltration rates for narrow and wider configuration were re-confirmed when was refined for the Concept Design (see Concept Design Appendix C1 Stuarts Point Groundwater Modelling Report (Beca, 2025)

Dunal Effluent Application Rates (FOS)

With the short- and long-term infiltration rates determined, the application of the design flows of treated effluent were introduced to determine the length of application.

To determine the application rate afactor of safety (FOS) was applied to the infiltration rates to take in account the future clogging and reductions in soil capacity that typically occur over time in land discharge systems.

A FOS of 4 -10% is recommended by the *United States Environmental Protection Agency (USEPA) 2006 Process Design Manual for Land Treatment of Municipal Wastewater Effluents for rapid infiltration to land of treated wastewater*.

With expectations of higher quality effluent from the Stuarts Point WWTP, a 10% FOS was applied to the longer duration (>5 day) infiltration rate, resulting in a design infiltration rate of 3.4 mm/hour.

Average Daily Water Flow (ADWF) for the wastewater scheme is 1.08 ML/day. When static groundwater levels are more than 0.8 m BGL, and based on a 10 m wide infiltration strip, the following infiltration areas are indicated to be required:

- Each infiltration (disposal) area would need to be approximately 1,300 m in length x 10 m wide.
- A minimum of 4 infiltration (disposal) areas is recommended to allow for rotation and spelling of the infiltration (disposal) areas.
- A total disposal field area of at approximately 6.4 ha (including an additional 20% site area for access and bunding) recommended to be further considered in future design stages.

A visual representation of groundwater flow under both natural conditions (no effluent application) and under active effluent application are presented in Figure 6Figure 6 below, demonstrating the constrained nature of the site with respect to seepage at the shoreline necessitating the focus on effluent application method.

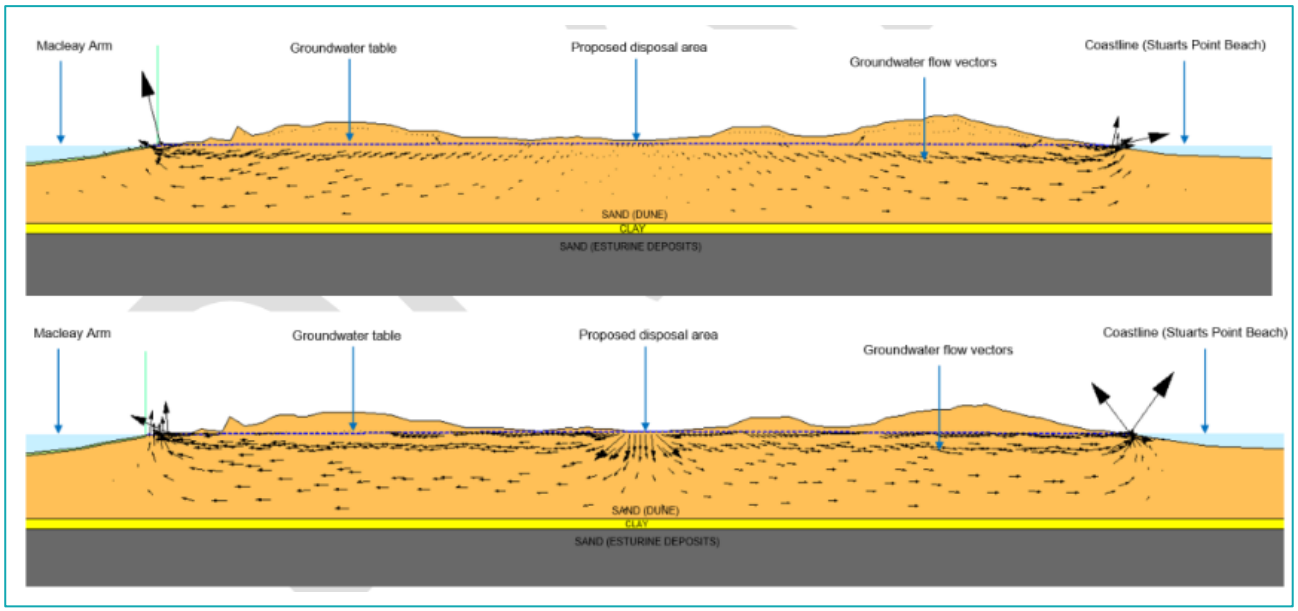


Figure 6 Dune model cross section - natural conditions in upper image, active disposal in lower image

Location and Site Comparison

A further comparison to note is that of the originally considered 3.8 Ha discharge area available for flooded distribution (South West Rocks) and the current controlled area of 6.5Ha which includes the allowance of 4 x 1.3 Ha irrigation zones (4 x 1300m) for rotation of effluent application and an access track.

This area is represented in Figure 7 below and shows the narrow longer configuration against the originally proposed disturbance area.

This figure has been used in community consultation, public information sessions since April 2025 and is included on the Council project website as part of its FAQ page.

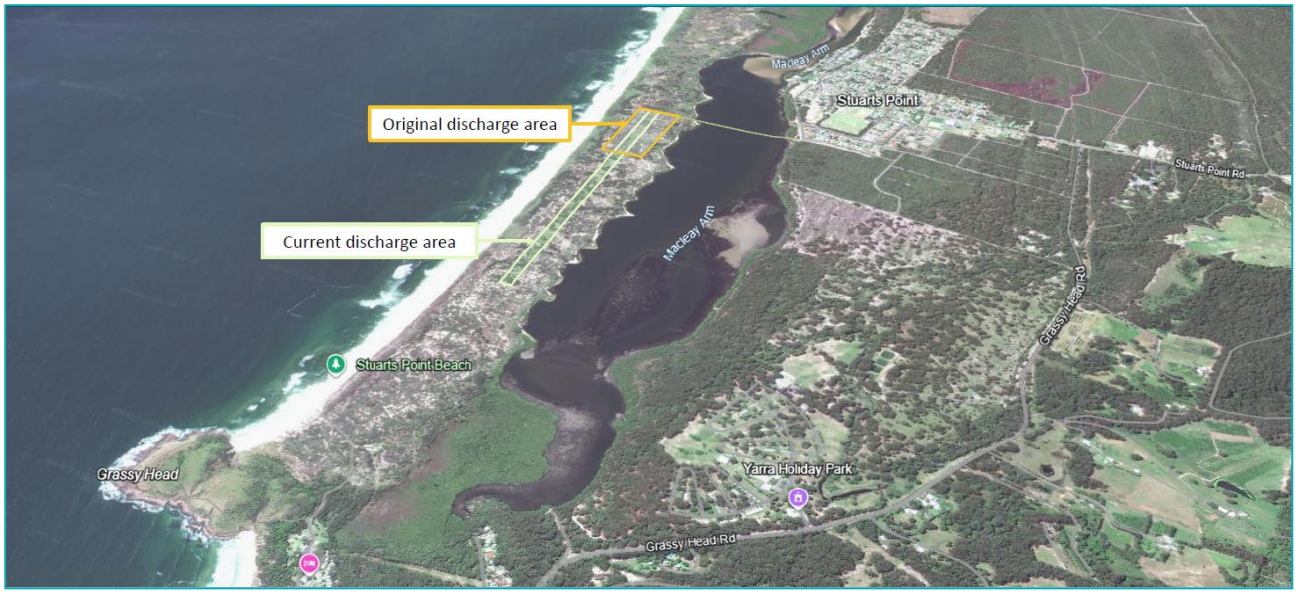


Figure 7 Comparison of Original Discharge Area to Current

Constraints and Design Criteria

The Feasibility Assessment identified a set of site constraints, and these were incorporated into design objectives to assess and develop feasible discharge options to progress to Concept Design, summarised in below.

Table 2 Dunal Site Constraints

Constraint	Description
Low Elevation	Site is low lying with a high groundwater table. Approximately 80% of the dunal area is below 2.5m AHD with groundwater at approximately 0.8m below surface
Localised GW System	Localised dunal groundwater system is highly sensitive to rainfall with seepage present on Stuarts Beach after rainfall
Infiltration rates	Groundwater mounding significantly impacts infiltration for constant duration discharge • initial infiltration rates are high (~135mm/hr for first 24hrs) • reduces quickly when groundwater has mounded (~34 mm/hr over following 5 days).
Configuration	The site necessities configuration of narrow discharges (multiple widths modelled - narrow configurations have higher infiltration rates than wider applications)
Coastal Hazard	Site is within the Coastal Vulnerability Area and the more favourable higher elevation barrier dune is within the Costal Erosion and Recession Hazards Zone and subject to current and future coastal erosion Available area for dunal discharge is within the lower lying central dunal area (coastal erosion/recession zones)
Topography	The dunal terrain is hummocky and variable and exposed to wind erosion and sand drift
Public Use	Stuarts Point Beach and Macleay Reach are popular recreational areas and increasingly so with planned population growth – high traffic 4WD, beach fishing, swimming, kayaking
Wet Weather	Site is highly sensitive to rainfall and application of effluent during wet weather would be very limited, with storage options needed to be considered until groundwater levels reduced.

Site constraints were considered against general considerations for the discharge infrastructure, and a set of design objectives were developed, see Table 3 below along with a summary of options comparison.

Table 3 Design Objectives

Objective	Description
Dry Weather Seepage	No Dry Weather Seepage of Effluent Outside of Designated Effluent Application Area (The dunal discharge method selected should be designed to maintain groundwater levels to within its natural range such that seepage is limited to its natural range).
Coastal Hazard	Dunal Discharge Infrastructure – located outside Coastal Hazard Zones 1 and 2 (Beach erosion and shoreline recession
Effluent Distribution	Dunal Discharge Infrastructure to allow for even and constant distribution across the 1300m long and 10m wide disposal field
Long term clogging	Dunal Discharge to avoid longer term clogging of sand from effluent application
Landform	Dunal Discharge to suit natural landform, vegetation and regrowth to minimise sand drift
	Sensitivity to rainfall and higher groundwater levels limiting discharge at the dunal site requires a systematic approach for management of treatment effluent – comprising: • Dunal Discharge Site • Storage at the Wastewater Treatment Plant
Project Objectives	supporting full development profile to 2047 without staging and further investment
Operational Feasibility	be within Kempsey Shire Council operational and maintenance capacity and capability
Environmental Impact	consider initial construction and ongoing environmental impact at and adjacent the site
Constructability	Within capability of construction contractors – clearing, minor earthworks, HDPE pipework, irrigation pipe, simple EIC and comms

Dunal Application Method - Options Assessment

A summary of dunal application methods assessed against the design objective is provided in Table 5 below and further description in Table 5

With consideration of the site constraints developed through the feasibility phase it became apparent that the more traditional methods of effluent application in NSW were not suitable for Stuarts Point.

With the need for effluent to be applied to a long and narrow configuration with a slower application rate on the low lying dunal site was limited to those that were more typically suited for effluent treatment or irrigation.

Table 4 Options Assessment against Criteria

Option	Dry Weather Seepage	Coastal Hazard	Effluent Distribution	Long Term Clogging	Project Objectives	Community/ Public Impact	Operational Feasibility	Enviro Impact	Construct
Flooded Distribution	X	X	X	X	X	X	✓	✓	✓
Exfiltration Pond	X	X	X	X	X	X	X	X	X
Elevated Platform	X	X	X	X	X	X	X	X	X
Exfiltration Basin	X	X	X	X	X	X	X	X	X
Low Pressure Effluent Dist.	✓	✓	✓	✓	✓	✓	✓	X	X
PC Drip Irrigation (Preferred)	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 5 Dunal Discharge Options Summary

Option		Comment
Flooded Distribution (South West Rocks)	Not Suitable	• Uncontrolled ponding and seepage across whole of dunes and shorelines
Exfiltration Pond	Not Suitable	• Varying pond depths assessed – 1m to 4m • Promoted seepage on shoreline • Pond construction at dunal site difficult – construction and maintenance of sand walls for water retention
Elevated Platform	Not Suitable	• Promoted seepage on shoreline • Extensive earthworks • Best location closer to barrier dune – subject to coastal erosion
Exfiltration Basin	Not Suitable	• Width of basins assessed – 10m, 50m, 100m • Long and Narrow configuration required (1300m long x 10m) • Even and consistent distribution of effluent over the long, narrow site very difficult using conventional pipework discharging across surface • Distribution of even pumped flows across the long and narrow configuration requires high level of engineering to prevent areas of high and low discharge • Distribution of low-rate pumped flows and constant pressure very difficult – high engineering required • Preferential concentrated areas of ponding likely with poor flow distribution (rate and volume) resulting in seepage on shorelines • Extensive earthworks required to construct basins and long-term vegetation removal needed • Longer term clogging of sand and maintenance considerations – limited opportunity for rotation of discharge areas • Vulnerable to sand drift with vegetation removal

Slow Rate Application Systems • Low Pressure Effluent Distribution • Low-Rate Pressure Compensating Drip irrigation	Suitable	• Methods available for distribution of effluent across long and narrow field • Methods available for large area application of effluent • Slow rate of effluent discharge to suit required application rate • Methods available for engineered or natural landforms • Irrigation methods available allow for vegetation re-growth and management • Methods allow for sand-drift over infrastructure (above and below ground applications) • Methods allow for rotation of application through discharge zones

The consideration of slow rate application methods and selection of preferred method for design was developed further in the Concept Design.

1.3.4 Concept Design (Beca, 2025)

The development of slow rate application method into the preferred option Low-Rate Pressure Compensated Drip Irrigation is detailed in the Concept Report.

This method is commonly used for treated effluent discharge in New Zealand and subject of a site visit by Kempsey Shire Council's Planning Engineer (Andrew Miller) and Wastewater Operations Manager (John Nelson) to five (5) sites in July 2024 across the north and south islands to confirm its suitability by Council's operators.

The Concept Design encompasses the full Treated Effluent Management System and compromises the elements shown in Table 6 below.

Table 6 Concept Design – Treated Effluent Management System

Report Name	Contents

Dunal Disposal Concept Design	• Concept Design Report Dunal Irrigation
	  ○ Basis of Design flows
	  ○ Dunal Site Hydrogeology - setting and constraints
	  ○ Dunal Irrigation Options
	  ○ Dunal Irrigation Concept
	  ○ Water Balancing (storage and discharge)
	  ○ Engineering Concept Design – civil, mechanical, electrical
	  ○ Operations and Maintenance
	• Drawings
	  ○ P&IDs – Irrigation System
	  ○ Civil Drawings - Irrigation area
	• Groundwater Modelling Report (Refined)

Stuarts Point WWTP– Design Guidance Report	• Design Guidance Memo - primarily process design and layout update of the GHD Reference Design with amended and additional process areas:
	  ○ Filtration
	  ○ UV
	  ○ Chlorination/De-chlorination
	  ○ Effluent Storage and Flow Balancing
	  ○ Emergency Overflow to Macleay Reach
	  ○ Pathogen Risk Management
	• Drawings
	  ○ WWTP P&IDs
	  ○ WWTP Civil Drawings

Preferred Option Summary

A summary of the preferred option "Low-Rate Pressure Compensating Drip Irrigation" method against the design objectives is provided in Table 7 below

Table 7 Preferred Dunal Option against Objectives

Objective	Summary
Dry Weather Seepage	Low-Rate Pressure Compensating Drip Irrigation method meets the criteria of no dry weather seepage on the Stuarts Point Beach and Macleay Reach shoreline
Coastal Hazard	The dunal discharge area is located away from the more disruptive Coastal Hazard zones (erosion and recession). Although remaining within the Coastal Zone Management Area Hazard area the coastal processes are more passive inundation and manageable.
Effluent Distribution	The Low-Rate Pressure Compensated Drip Irrigation method provides a high level of distribution of effluent across the irrigation zone and is suitable for remote rotation of discharge across the four irrigation zones
Long Term Clogging	Long term clogging of dunal sand substate is a key issue for dunal effluent discharges, the combination of higher-level treatment the Stuarts Point WWTP and the rotation of the discharge through the four zones is to provide for long term infiltration of effluent to the
Project Objectives	The project objectives of: • safe collection of wastewater and reducing public health impacts • environmentally and financially sustainable solution • improved aquifer and river health • support for development and economic growth In particular support for development and economic growth is achieved with the dunal method selected supporting the full development to 2047 and allowing for beach and river users without the impact of seepage on to sand during dry weather, along with an emergency disposal in wet weather
Community/ Public Impact	Beach and river users will not experience seepage on the sand and not impact on their use of the beaches. The dunal site itself is inland of the areas that public access and does not impact their use of dunal area
Operational Feasibility	Although the irrigation method of wastewater effluent disposal is new to Kempsey Shire Council – use of leachate irrigation is part of normal operations within the waste management facility and team. KSC's Planning Engineer and Treatment Operations Manager visited multiple sites in New Zealand of similar scale and satisfied that the method is within operational capability. The technology is simple, with repairs not requiring any particular skills. Vegetation maintenance seen as the only issue which would also be common to other methods.
Enviro Impact	Clearing is required for initial installation, however the method does allow for vegetation regrowth particularly grasses for dunal erosion management and selective retention of larger trees. The site is subject to full BDAR assessment as part of the EIS.
Constructability	Site construction uses known methods excavator, clearing , mulching then the laying of irrigation pipework – low skill and impact work.

Treated Effluent Emergency Overflow

The dunal site is limited in its use during certain wet weather events and the Treated Effluent Management System requires the storage of effluent until groundwater returns to more favourable levels.

In the event of longer duration wet weather events an emergency overflow into the Macleay Reach was found to be needed.

Analysis and Frequency

Using the inflow, rainfall and dune disposal capacity, multiple model runs were conducted with varying rainfall patterns and effluent storage volumes at the SPWWTP. Key considerations in running the scenarios were:

- Noting the future uncertainty with regards to population growth rates, the ability to stage storage over time is important
- Large storage volumes will be problematic from an operational perspective. The quality of effluent when stored for long periods of time can deteriorate and returning high flows can reduce the performance of the SPWWTP.
- Noting the above, ideally the effluent storage can be drained within 3-4 days using the residual capacity of the treatment plant.

In consideration of the above constraints, an optimised storage volume of 3 ML (2 x 1.5 ML tanks) up to 2038 loadings and an additional 1.5 ML storage to the ultimate loadings was developed.

Nominally, the proposed storage volume would result in an average of one emergency discharge event per year for the life of the plant.

An overflow event is defined as one or more consecutive days in which discharge directly to the Macleay Arm would be required. A graph showing the volume of effluent overflows to the Macleay Arm as well as the average number of events per year is displayed in Figure 8 below.

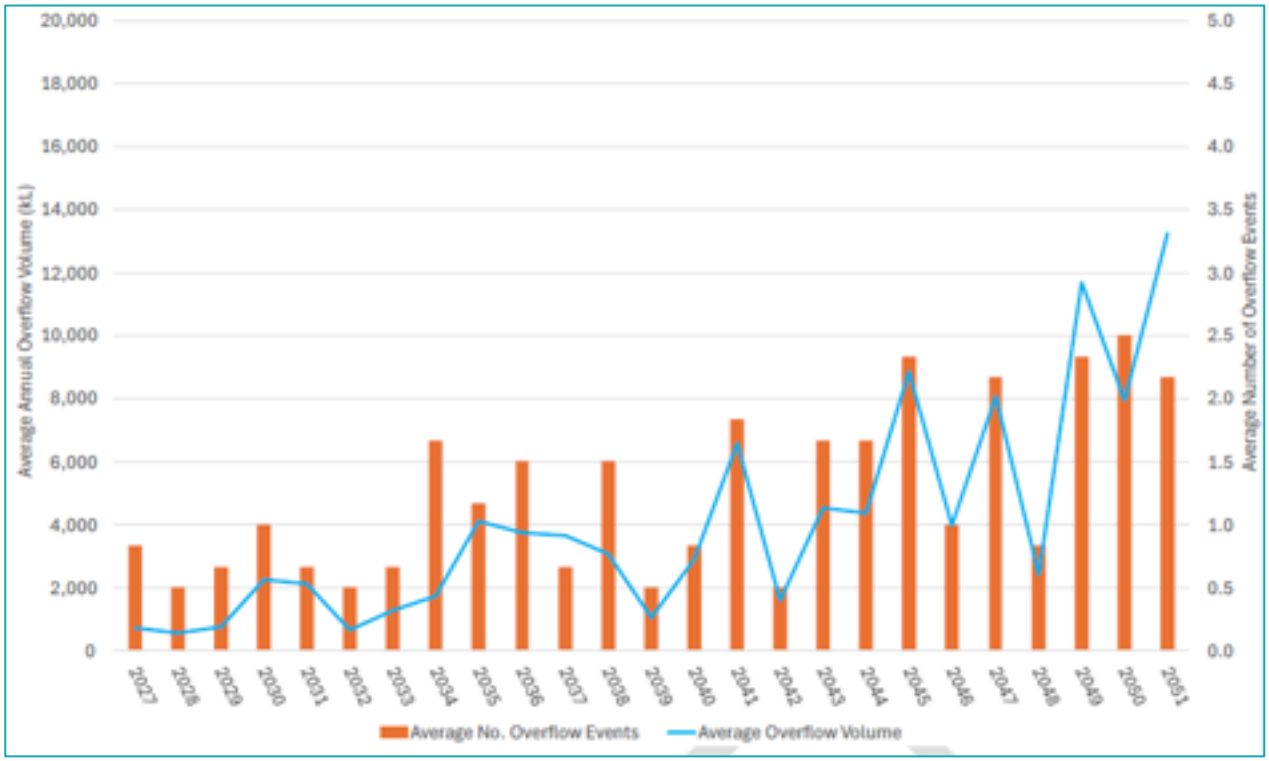


Figure 8 Emergency Overflow Analysis and Frequency

Emergency Overflow Location

The Treated Effluent Emergency Overflow discharge location will utilise an existing DN600 stormwater pipe that discharges into the Macleay Reach downstream of the existing on-site treatment transpiration area for the Stuarts Point Caravan Park.

The emergency overflow pipeline route and location is shown in Figure 9 below and Emergency Overflow Locationselection was based on:

- infrequent nature of the discharge
- the high-level treatment and disinfection of the effluent
- avoidance of construction within coastal wetlands (in placing an additional pipe into the Macleay Reach)
- further dilution with stormwater discharge

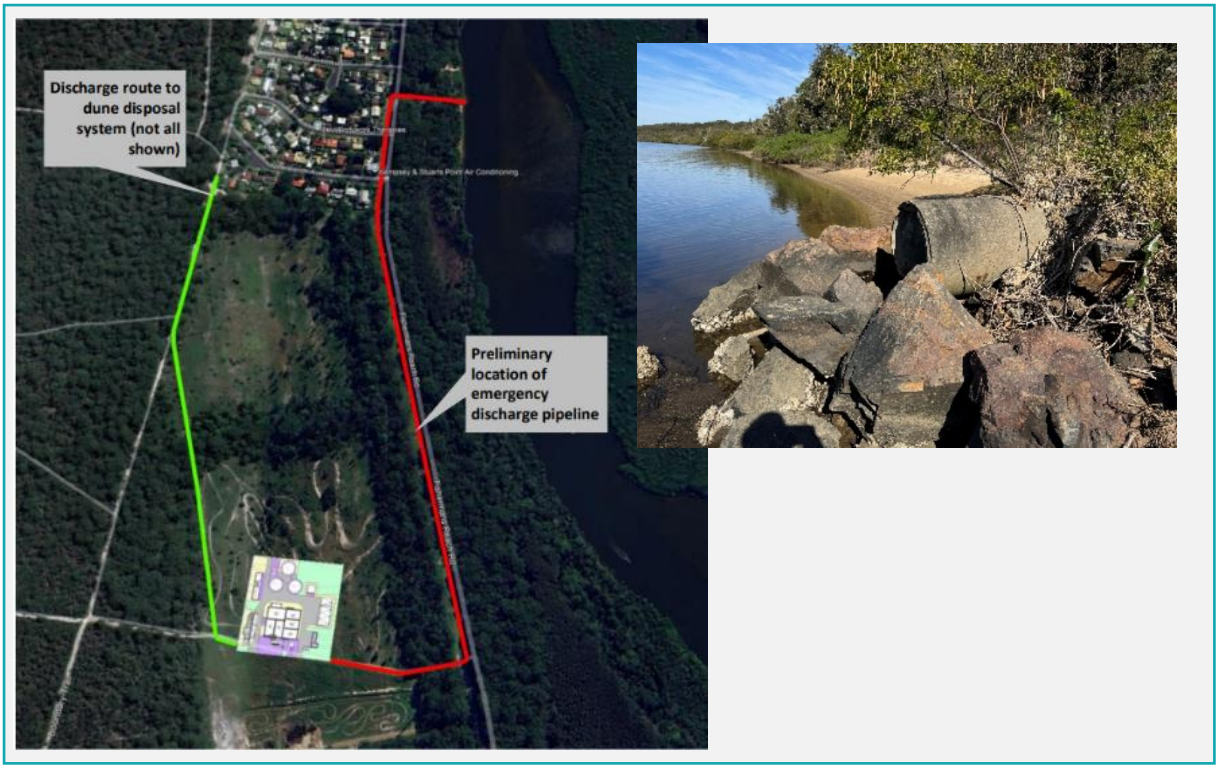


Figure 9 Emergency Overflow Location

Regards,

Rennie Ferguson
Senior Associate Project Management
+61457 905 314
rennie.ferguson@beca.com

Table 8 Kempsey Shire Council - Summary of Stuarts Point Dunal Discharge Groundwater, Water Quality and Disposal Methods

Period	By	Report Title	SharePoint Link
July 2019	GHD	SPSS Groundwater Modelling	22185124402-REP-B_Groundwater Modelling - Stuarts Point WWTP.pdf
Jan 2020	GHD	Stuarts Point Sewerage Scheme WWTP Marine Mixing Modelling	12517849-REP-A_WWTP Marine Mixing Modelling Report.pdf
Jan 2023	GHD	SPSS Effluent Transfer and Disposal Concept Design	SPSS Effluent Transfer Design Concept Design.pdf
April 2024	GHD	KSC - Groundwater and marine/estuarine modelling update – V00	12636028-MEM-0_KSC SPSS Marine Mixing Model Update.pdf
16/5/24	RF to GHD	*BecaHH2O (KSC) Email to GHD*	RE Dunal Discharge Groundwater and Marine Estuarine Modelling Memo RF to GHD - Seepage and Pond 160524.msg
21/5/24	RF to GHD	*BecaHH2O (KSC) Email to GHD*	Stuarts Point - Dunal Discharge Discussion RF to GHD - Injection 210524 .msg
22/5/24	RF to GHD	*BecaHH2O (KSC) Email to GHD*	RE Stuarts Point - Dunal Discharge Discussion RF to GHD 220524.msg
23/5/24	RF to GHD	*BecaHH2O (KSC) Email to GHD*	Re Stuarts Point - Conceptualisation Confirmation RF to GHD 230524 .msg
23/5/24	RF to GHD	*BecaHH2O (KSC) Email to GHD*	Re Stuarts Point - Conceptualisation RF to GHD 230524 .msg
12/6/24	GHD to RF	*Email from GHD to BecaHH2O (KSC)*	RE Stuarts Point - Dunal Discharge GHD to RF 120624 .msg
July 2024	GHD	KSC - Groundwater and marine/estuarine modelling update memo – V01	12636028-MEM-0_GW modelling update.pdf
July 2024	GHD	KSC - Groundwater and marine/estuarine modelling update memo – V02	12636028-MEM-1_GW modelling update.pdf
Aug 2024	Beca	KSC Interim Results Presentation 29/8/25	Stuarts Point WWTP_ KSC discussion 29AUG2024.pdf
Nov 2024	Beca	Stuarts Point Dunal Discharge Feasibility	Stuarts Point WWTP Dunal Discharge Assessment Report (Compiled).pdf
May 2025	Beca	Stuarts Point Dunal Discharge Feasibility – SEEP/W Hydrogeological Assessment	Beca_Stuarts Point_Hydrogeological Interpretive SEEP W Modelling Report.pdf
July 2025	Beca	• Stuarts Point Disposal Field Concept Design • Stuarts Point GW Modelling Report - Dune Wastewater Disposal Concept • Stuarts Point WWTP– Design Guidance Report	SPSS - Dune Disposal Concept Design Appendix C Part 1.pdf - Stuarts Point Groundwater Modelling Report
July 2025	KSC	NZ Effluent Site Inspection Report Final	NZ Effluent Site_Inspection_Report_Final.pdf

State Government Agency Consultation Record

Department of Climate Change, Energy, the Environment and Water – Water

RAMBOLL

ENVIRONMENT
& HEALTH

Department of Climate Change, Energy, the Environment and Water – Water Group
Locked Bag 5022
Parramatta, NSW 2124

Attention: Maddy Gunethilake
Email: water.assessments@dpie.nsw.gov.au
water.enquiries@dpie.nsw.gov.au

Stuarts Point Sewerage Scheme Project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

The project would consist of the installation of a low-pressure sewer network to service approximately 540 properties across Stuarts Point, Grassy Head and Fishermans Reach, and would include the individual property connection system infrastructure required to connect existing properties into the low-pressure sewer network. Treatment of the collected wastewater would be supplied by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) per day located to the south of Stuarts Point township.

The project would include disposal of the treated effluent in the narrow dune system between the Tasman Sea and Macleay Arm to the east of Stuarts Point. Effluent would be transferred to the effluent disposal area via an effluent transfer pipeline inclusive of 450 metres of pipework installed beneath the Macleay Arm via trenchless underground boring.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems. Additionally, the area is planned for future residential development and as such, a revised sewer strategy is required to accommodate the increasing loads.

The estimated development cost of the project is valued at over $55.5 million. The project is therefore considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* and the *State Environmental Planning Policy (Planning Systems 2021)*.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

SEARs for the project were issued on 21 April 2023 (refer to **Attachment 2**) and require consultation with:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW) – Conservation Programs, Heritage & Regulation Group (DCCEEW CPHR)
- DCCEEW– Water Group (DCCEEW Water)
- Department of Primary Industries (DPI) – Fisheries (DPI – Fisheries)
- DPI – Agriculture (DPI – Agriculture)
- NSW Environment Protection Authority (NSW EPA)
- National Parks and Wildlife Services (NPWS)
- NSW Health
- Heritage NSW
- Water NSW
- Transport for NSW (TfNSW)
- Crown lands
- Fire and Rescue NSW (FRNSW)
- NSW State Emergency Service (NSW SES)
- NSW Rural Fire Service (NSW RFS).

As required by the SEARs, consultation with DCCEEW Water is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach. These communities are currently relying on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- wastewater collection and transfer system:
  - low pressure sewer network
  - property collection systems
- Stuarts Point Wastewater Treatment Plant (WWTP)
- treated effluent disposal system:
  - treated effluent pipeline
  - dunal discharge

The objectives of the project are to:

- provide a centralised and modern wastewater system for the communities of Stuarts Points, Fishermans Reach and Grassy Head
- improve the flood resilience of Stuarts Point and surrounds through the removal of onsite sewage management systems
- enable planned population growth and economic development across the Stuarts Point, Fishermans Reach and Grassy Head
- reduce the environmental impact to the local groundwater aquifer from pollution events associated with the underperforming onsite sewage management systems

Wastewater Collection and Transfer System

The key elements of the wastewater collection and transfer system would be the low-pressure sewer network and the property collection systems.

Low-pressure sewer network

The low-pressure sewer network would transfer wastewater generated from residential, commercial and industrial properties within the scheme area spanning Grassy Head, Stuarts Point and Fishermans Reach to the Stuarts Point WWTP via a network of low-pressure sewer main systems.

The main construction method for pipes will be trenchless underground boring using horizontal directional drilling (HDD), which requires significantly less surface disturbance compared to traditional trenching methods. This involves establishing discrete drill sites with shallow entry pits for a surface launched drill to install the pipe through the subsurface in a shallow arc and linking sections approximately every 100 metres as required for valve placements, drill exit sites and pipe joining.

Where the under boring equipment needs to be established or two sections of under bored pipe needs joining and native vegetation disturbance is unavoidable, or where under boring is not an option and trenching is required, vegetation removal with a maximum clearance corridor of five metres may be required. This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Operation of the sewer network would see the network continually transfer wastewater to the WWTP and would involve routine maintenance to address blockages and leaks.

Property collection systems

The property collection systems comprise the infrastructure required to connect the residential and commercial properties in the scheme area to the low-pressure sewer network. The final design and installation of the property connection systems would be undertaken in consultation with property owners during a property audit that would be undertaken by specialist auditors.

Stuarts Point WWTP

The WWTP would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes and disinfection.

Construction of the WWTP would involve bulk earthworks, building of the plant, installation of treatment processes, and installation of services. The WWTP would continuously operate, with up to three staff attending daily operations comprising regular monitoring and maintenance of treatment processes to maintain compliance with effluent quality criteria.

Treated Effluent Disposal System

The treated effluent disposal system comprises the treated effluent pipeline and the dunal discharge.

Treated effluent pipeline

The treated effluent pipeline would be located within Lot 1 DP1284907 (the WWTP site), the road reserve and part Lot 7300 DP115278 (the dunal discharge site) and comprise approximately 2.7 kilometres of pipework to transfer tertiary treated and disinfected effluent from the WWTP to the dunal discharge area.

The treated effluent pipeline crossing of the Macleay Arm is proposed as a trenchless crossing design involving HDD through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm. This major underbore would be undertaken via the establishment of a major underbore entry site on the corner of Kimpton Street and Marine Parade in Stuarts Point (west of the Macleay Arm) and the establishment of a major underbore exit site within the southern area of the land proposed for the dunal discharge (east of the Macleay Arm).

Operation of the treated effluent pipeline will include routine maintenance to maintain the transfer of tertiary treated and disinfected effluent from the Stuarts Point WWTP to the dunal discharge.

Dunal discharge

The dunal discharge involves the discharge of treated effluent through the dunal system on the eastern side of the Macleay Arm within part Lot 7300 DP115278 via surface irrigation. Construction of the dunal discharge would involve vegetation clearance and installation of surface irrigation pipework, ancillary infrastructure and the erection of security fencing and signage. Construction vehicles and machinery would access the dunal discharge site along the beach, from the authorised beach access at the Grassy Head Holiday Park.

Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

The project is located in the Macleay River catchment which supports a range of water uses such as water utilities, local councils, conservation, livestock grazing, dryland agriculture and forestry and tourism. It runs adjacent to the Macleay Arm which forms part of the Macleay River estuary. The communities of Stuarts Point, Grassy Head and Fishermans reach receive a potable water supply predominately sourced from groundwater borefields with the Steuart McIntrye Dam serving as an alternative source.

Development of the project will involve the construction and operation of the treated effluent pipeline and the dunal discharge area. Tertiary treated and disinfected effluent will be pumped through the pipeline extending two kilometres from the WWTP to the dunal discharge site. Approximately 450 metres of the pipeline will run east to west beneath the Macleay Arm to the vegetated dunal discharge area located at Lot 73600 DP 1152758.

Effluent disposal will occur in the dunal area on the eastern section of the Macleay Arm. The effluent disposal area would include a short section of riser pipe to bring effluent to the surface to allow surface discharges via a diffuser manifold and spalls onto a small area of riprap before flowing onto the ground. The effluent disposal area required for effluent application would be approximately 6.7 hectares of land identified in the coastal dune area, which has been sized to accommodate 100% discharge.

Three-dimensional hydrodynamic modelling was undertaken on the dunal discharge in the vicinity of the Macleay Reach and River which showed nutrient and salinity loads from groundwater discharge are predicted to rapidly reduce to acceptable water quality standards in close proximity to the groundwater discharge boundary.

A detailed water assessment will be undertaken and will describe the baseline groundwater quality and hydraulic conductivity, estimate water take during the project, identify required water entitlements and licences and identify water quality impacts from the project and propose mitigation and management measures. Additionally, a Dewatering Management Plan will be prepared as dewatering of groundwater is expected to be required during construction.

It is understood that Council and representatives of the design team have been in consultation with DCCEEW Water regarding the marine mixing modeling and impacts to the Macleay Arm and the outcomes of such consultation with be considered and addressed in the EIS. The focus of this consultation letter is on the impacts of the project on the local groundwater.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Patricia Borges <patricia.borges@dcceew.nsw.gov.au> on behalf of DPIE Water Assessments Mailbox <water.assessments@dpie.nsw.gov.au>
Sent: Thursday, 24 July 2025 12:21 PM
To: Charyssa Lawrence
Cc: Shaun Taylor
Subject: Re: Stuarts Point Sewerage Scheme Project: Request for DCCEEW Water Input

Hi Charyssa,

Thank you for your email.

NSW DCCEEW Water will provide the advice once the final Environmental Impact Statement (EIS) has been finalised and lodged on the Major Projects Portal.

Please don't hesitate to reach out if you have any further questions.

Kind regards,

Patricia Borges
Assistant Projects Officer
Knowledge Office | Department of Climate Change, Energy, the Environment and Water
E patricia.borges@dpie.nsw.gov.au
Level 17, 4 Parramatta Square, Parramatta NSW 2124
www.dcceew.nsw.gov.au

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Thursday, 24 July 2025 10:43 AM
To: DPIE Water Assessments Mailbox <water.assessments@dpie.nsw.gov.au>; DPIE Water Enquiries Mailbox <water.enquiries@dpie.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>
Subject: Stuarts Point Sewerage Scheme Project: Request for DCCEEW Water Input

Hi Maddy,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with Department of Climate Change, Energy, the Environment and Water – Water Group is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The **attached letter** has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by **14 August 2023**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
https://www.ramboll.com/

State Government Agency Consultation Record

Department of Primary Industries – Fisheries

ENVIRONMENT
& HEALTH

Department of Regional NSW
Department of Primary Industries – Fisheries
1243 Bruxner Highway
Wollongbar NSW 2477
Attention: Jonathan Yantsch
jonathan.yantsch@dpi.nsw.gov.au

Date 11/12/2023

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

Stuarts Point Sewerage Scheme project

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to Figure 1 in Attachment 1).

The proposed project will consist of the installation of a pressure sewerage network ultimately for approximately 1,500 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of 5,345 Equivalent Persons (EP) located to the south of the Stuarts Point township.

The project will include disposal of the treated effluent in the narrow dune system between the Pacific Ocean and Macleay Arm to the northeast of Stuarts Point.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems.

Additionally, the area is in a desirable coastal / estuarine position and includes large areas of appropriately zoned lands (RU5 Village in the *Kempsey Local Environmental Plan 2013*). The construction of a centralised sewerage scheme will remove major constraints to development and promote economic growth and residential development opportunities within the area.

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ACN 095 437 442
ABN 49 095 437 442

The capital investment value of the project is valued at over $30 million and considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *State Environmental Planning Policy (Planning Systems 2021)* (Planning Systems SEPP).

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The SEARs for the project were issued on 21 April 2023 with inputs from (refer to Attachment 2):

- Department of Planning and Environment – Biodiversity and Conservation Division (BCD)
- Department of Primary Industries – Fisheries (DPI – Fisheries)
- Department of Primary Industries – Agriculture (DPI – Agriculture)
- Fire and Rescue NSW (FRNSW)
- Department of Planning and Environment – Water (DPE Water)
- Environment Protection Authority (EPA)
- Transport for NSW (TfNSW)
- Heritage NSW
- NSW State Emergency Service (SES)
- Water NSW
- NSW Rural Fire Service (NSW RFS).

As required by the SEARs, consultation with Department of Primary Industries – Fisheries is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The proposed Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach (the SPSS localities). The communities comprising the SPSS localities currently rely on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- pressure sewer network
- property collection system
- Stuarts Point WWTP
- effluent transfer pipeline
- effluent disposal area.

The objectives of the project are to:

- provide sewerage infrastructure for the existing residents of SPSS localities
- support and facilitate the planned future residential development across Stuarts Point, Fishermans Reach and Grassy Head
- reduce environmental impacts associated with sewerage management
- eliminate odours and water quality issues associated with existing underperforming onsite sewerage management systems.

Key features of the project include:

- construction of approximately 21.1 kilometres of reticulated pressure pipe and associated ancillary infrastructure (flush pumps, air valves, isolation valves and boundary kits) designed for:
  - transfer of loads up to 1,025 kilolitres per day under average dry weather flow (ADWF) conditions
  - an estimate peak population of 5,345 persons

- mechanical and electrical fit out of the WWTP, including:
  - inlet works
  - intermittently decanted extended aeration (IEDA) biological treatment process
  - IDEA effluent pump station
  - provision for future effluent filtration
  - UV disinfection
  - effluent disposal pump station
  - sludge storage tanks
  - mobile sludge dewatering area
  - chemical storage and dosing
  - odour management
  - foul water pump station
- ongoing maintenance activities including inspections, monitoring and repairs as required
- effluent transfer proposed as a trenchless crossing involving horizontal directional drilling (HDD) through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm
- effluent disposal in the dunal area on the eastern area of the Macleay Arm including a short section of riser pipe to bring effluent to the surface to allow surface discharges onto a small area of riprap before flowing onto the ground
- decommissioning of existing redundant on-site sewage management systems including:
  - off-site disposal of the contents of existing on-site treatment systems
- permanent onsite ancillary infrastructure
  - at the WWTP including:
    - staff office
    - operations and control room
    - meeting facilities and staff amenities
    - sealed site road and paths
    - electrical works
    - permanent lighting
    - CCTV
    - security fencing
    - vegetation screen and landscaping
  - security fencing and signage indicating unauthorised access at the effluent disposal area
- temporary construction infrastructure including:
  - site and worker's compound including site parking, office and amenities
  - laydown areas
  - stockpile areas
  - drill pad launch areas
  - temporary fencing.

A maximum five metres buffer has been applied to the sewerage collection system route in which any disturbance associated with the project would be limited (refer to Figure 1 in Attachment 1). This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Construction of the project would involve trenchless underground boring for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence early 2025 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

The operational lifespan of the project is approximately 50 years. Components of the project will remain in operation until they are either upgraded or become redundant. Prior to decommissioning, a net environmental benefit analysis (NEBA) (or similar) would be undertaken to determine the most appropriate approach to decommissioning and would consider the environmental impacts of removal of the rising main versus the potential benefits of leaving the facilities in-situ.

Key issues for your consideration

Mapped key fish habitat occurs at the site. The mapping is largely associated with the Macleay Arm (up to its tidal extent) and mapped coastal wetlands areas that include mangrove, saltmarsh and seagrass communities. The project is also upstream of Priority Oyster Aquaculture Areas (POAAs) which rely on specific water quality conditions.

Impacts to key fish habitats are not expected to occur because of the project as the project involves underboring the Macleay Arm with no works undertaken within the bed of any waterways. The transfer pipeline will be installed using best practice construction methods including horizontal directional drilling. The project would not obstruct fish passage.

Aquaculture leases (oysters) and oyster reefs occur in Fishermans Reach. The project will not impact on these directly and the EIS will consider the potential impacts on water quality.

DPE SEARs request that an aquatic ecology assessment be prepared for the project in accordance with the Policy and Guidelines for Fish Habitat Conservation and Management 2013. We would like to discuss this requirement with you and confirm agreement that impacts to aquatic ecology would be avoided by the project with consideration to the described construction methodology and an aquatic ecology assessment would not need to be prepared for the project.

The EIS will also address matters raised in your letter dated 11 April 2023 as appropriate.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by 22 December 2023.

Should you wish to further discuss or provide comment please do not hesitate to contact myself on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
3184321 - Hunter IA

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Jonathan Yantsch <jonathan.yantsch@dpi.nsw.gov.au>
Sent: Monday, 6 May 2024 2:12 PM
To: Shaun Taylor
Cc: Charyssa Lawrence
Subject: RE: Stuarts Point Sewerage Scheme Project: Request for DPI Fisheries Input

Hi Shaun

I refer to your letter dated 11 December 2023 requesting comment on the subject proposal including whether an aquatic ecology assessment would be necessary given that impacts to key fish habitat will be avoided by the proposal.

I can confirm that DPI Fisheries supports the SEARs issued for this project on 21 April 2023 and that the issues and comments made by DPI Fisheries in our submission to the SEARs, dated 11 April 2023, remain relevant.

Noting DPI Fisheries has no ability to override the SEARs, considering the construction methodology which will likely avoid impacts to key fish habitat, DPI Fisheries would be supportive of a modified and reduced aquatic ecology assessment that only incorporates details of locations that will be directly or indirectly affected by the proposal, both during construction and operation of the project.

DPI Fisheries reiterates the need for the EIS to address the specific water quality conditions requires by POAAs and the potential for the project to impact these water quality conditions, particularly during operation.

Please contact me on the details below if you have any further questions.

Regards

Jonathan

Jonathan Yantsch
Senior Fisheries Manager, Coastal Systems (North Coast)
Marine Estate Management
Department of Regional NSW

P 02 6626 1375 **E** jonathan.yantsch@dpi.nsw.gov.au

regional.nsw.gov.au

Wollongbar Agricultural Institute

Department of Regional NSW

We stand on Country that always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

Classification: Confidential

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Monday, 11 December 2023 10:08 AM
To: Jonathan Yantsch <jonathan.yantsch@dpi.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>
Subject: Stuarts Point Sewerage Scheme Project: Request for DPI Fisheries Input

Hi Jonathan,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network ultimately for approximately 1,500 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of 5,345 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with Department of Primary Industries – Fisheries is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The attached letter has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by 22 December 2023.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons 1)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

State Government Agency Consultation Record

Department of Primary Industries – Agriculture

RAMBOLL

ENVIRONMENT
& HEALTH

Department of Industry – Agriculture
105 Prince Street Locked Bag 21
Orange, NSW 2800

Attention: Paul Garnett
Email: landuse.ag@dpi.nsw.gov.au

Stuarts Point Sewerage Scheme project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

The project would consist of the installation of a low-pressure sewer network to service approximately 540 properties across Stuarts Point, Grassy Head and Fishermans Reach, and would include the individual property connection system infrastructure required to connect existing properties into the low-pressure sewer network. Treatment of the collected wastewater would be supplied by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) per day located to the south of Stuarts Point township.

The project would include disposal of the treated effluent in the narrow dune system between the Tasman Sea and Macleay Arm to the east of Stuarts Point. Effluent would be transferred to the effluent disposal area via an effluent transfer pipeline inclusive of 450 metres of pipework installed beneath the Macleay Arm via trenchless underground boring.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems. Additionally, the area is planned for future residential development and as such, a revised sewer strategy is required to accommodate the increasing loads.

The estimated development cost of the project is valued at over $55.5 million. The project is therefore considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* and the *State Environmental Planning Policy (Planning Systems 2021)*.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

SEARs for the project were issued on 21 April 2023 (refer to **Attachment 2**) and require consultation with:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW) – Conservation Programs, Heritage & Regulation Group (DCCEEW CPHR)
- DCCEEW– Water Group (DCCEEW Water)
- Department of Primary Industries (DPI) – Fisheries (DPI – Fisheries)
- DPI – Agriculture (DPI – Agriculture)
- NSW Environment Protection Authority (NSW EPA)
- National Parks and Wildlife Services (NPWS)
- NSW Health
- Heritage NSW
- Water NSW
- Transport for NSW (TfNSW)
- Crown lands
- Fire and Rescue NSW (FRNSW)
- NSW State Emergency Service (NSW SES)
- NSW Rural Fire Service (NSW RFS).

As required by the SEARs, consultation with DPI Agriculture is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach. These communities are currently relying on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- wastewater collection and transfer system:
  - low pressure sewer network
  - property collection systems
- Stuarts Point Wastewater Treatment Plant (WWTP)
- treated effluent disposal system:
  - treated effluent pipeline
  - dunal discharge

The objectives of the project are to:

- provide a centralised and modern wastewater system for the communities of Stuarts Points, Fishermans Reach and Grassy Head
- improve the flood resilience of Stuarts Point and surrounds through the removal of onsite sewage management systems
- enable planned population growth and economic development across the Stuarts Point, Fishermans Reach and Grassy Head
- reduce the environmental impact to the local groundwater aquifer from pollution events associated with the underperforming onsite sewage management systems

Wastewater Collection and Transfer System

The key elements of the wastewater collection and transfer system would be the low-pressure sewer network and the property collection systems.

Low-pressure sewer network

The low-pressure sewer network would transfer wastewater generated from residential, commercial and industrial properties within the scheme area spanning Grassy Head, Stuarts Point and Fishermans Reach to the Stuarts Point WWTP via a network of low-pressure sewer main systems.

The main construction method for pipes will be trenchless underground boring using horizontal directional drilling (HDD), which requires significantly less surface disturbance compared to traditional trenching methods. This involves establishing discrete drill sites with shallow entry pits for a surface launched drill to install the pipe through the subsurface in a shallow arc and linking sections approximately every 100 metres as required for valve placements, drill exit sites and pipe joining.

Where the under boring equipment needs to be established or two sections of under bored pipe needs joining and native vegetation disturbance is unavoidable, or where under boring is not an option and trenching is required, vegetation removal with a maximum clearance corridor of five metres may be required. This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Operation of the sewer network would see the network continually transfer wastewater to the WWTP and would involve routine maintenance to address blockages and leaks.

Property collection systems

The property collection systems comprise the infrastructure required to connect the residential and commercial properties in the scheme area to the low-pressure sewer network. The final design and installation of the property connection systems would be undertaken in consultation with property owners during a property audit that would be undertaken by specialist auditors.

Stuarts Point WWTP

The WWTP would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes with disinfection.

Construction of the WWTP would involve bulk earthworks, building of the plant, installation of treatment processes, and installation of services. The WWTP would continuously operate, with up to three staff attending daily operations comprising regular monitoring and maintenance of treatment processes to maintain compliance with effluent quality criteria.

Treated Effluent Disposal System

The treated effluent disposal system comprises the treated effluent pipeline and the dunal discharge.

Treated effluent pipeline

The treated effluent pipeline would be located within Lot 1 DP1284907 (the WWTP site), the road reserve and part Lot 7300 DP115278 (the dunal discharge site) and comprise approximately 2.7 kilometres of pipework to transfer tertiary treated and disinfected effluent from the WWTP to the dunal discharge area.

The treated effluent pipeline crossing of the Macleay Arm is proposed as a trenchless crossing design involving HDD through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm. This major underbore would be undertaken via the establishment of a major underbore entry site on the corner of Kimpton Street and Marine Parade in Stuarts Point (west of the Macleay Arm) and the establishment of a major underbore exit site within the southern area of the land proposed for the dunal discharge (east of the Macleay Arm).

Operation of the treated effluent pipeline will include routine maintenance to maintain the transfer of tertiary treated and disinfected effluent from the Stuarts Point WWTP to the dunal discharge.

Dunal discharge

The dunal discharge involves the discharge of treated effluent through the dunal system on the eastern side of the Macleay Arm within part Lot 7300 DP115278 via surface irrigation. Construction of the dunal discharge would involve vegetation clearance and installation of surface irrigation pipework, ancillary infrastructure and the erection of security fencing and signage. Construction vehicles and machinery would access the dunal discharge site along the beach, from the authorised beach access at the Grassy Head Holiday Park.

Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

The project is in the Macleay River catchment over a space of approximately 11,540 square kilometres. The catchment supports a range of water uses such as water utilities, conservation, livestock grazing, forestry and tourism, local councils and dryland agriculture. The proposed WWTP would be to the west of Fishermans Reach Road approximately 600 metres south of the Stuarts Point township. Agricultural farmland is in close proximity to the proposed WWTP site.

A Land Use Conflict Risk Assessment (LUCRA) is being prepared with reference to the *Land Use Conflict Risk Assessment Guide* (DPI, 2011) which will consider the project's impact on agricultural land and activities.

The LUCRA will involve completing a desktop review of background information using publicly available registers and information to identify existing land uses in the area, such as agriculture, national parks and reserves and Crown Lands. It will incorporate outcomes from community and stakeholder consultation which may provide additional information on current land uses that may not be publicly available and inform priority concerns.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Helen Willis <Helen.Willis@dpird.nsw.gov.au> on behalf of DPIRD Landuse Ag <landuse.ag@dpird.nsw.gov.au>
Sent: Thursday, 24 July 2025 4:33 PM
To: Charyssa Lawrence
Cc: Shaun Taylor
Subject: RE: Stuarts Point Sewerage Scheme: Request for DPI Agriculture Input [Filed 24 Jul 2025 16:35]

Categories: Filed by Mail Manager

Good afternoon Charyssa,

Thank you for your email. For your information, Paul Garnett is no longer part of the Agricultural Land Use Planning team.

The Department's letter in response to the request for SEARs (OUT23/5022, 3 April 2023) identified the potential issues of concern related to the proximity of the proposed wastewater treatment plant and effluent disposal area to agricultural land uses to the south at Fishermans Reach. The Department requested that a LUCRA, a biosecurity risk assessment and effluent reuse be outlined in an EIS. I note that your letter advises that a LUCRA is being prepared.

We look forward to reviewing the requested information outlined in the EIS. The Department has no further comments at this time.

Kind regards,
The Agricultural Land Use Planning Team
Climate and Natural Resources | Agriculture and Biosecurity
Department of Primary Industries and Regional Development
E: landuse.ag@dpird.nsw.gov.au
www.dpi.nsw.gov.au

NSW GOVERNMENT
Department of Primary Industries and Regional Development

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Thursday, 24 July 2025 10:49 AM

To: DPIRD Landuse Ag <landuse.ag@dpird.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>
Subject: Stuarts Point Sewerage Scheme: Request for DPI Agriculture Input

Hi Paul,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with Department of Primary Industries – Agriculture is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The attached letter has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by **14 August 2023**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300

https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

State Government Agency Consultation Record

NSW Health

ENVIRONMENT
& HEALTH

NSW Health
Locked Mail Bag 2030
St Leonards NSW 1590
Australia
Attention: Sandy Leask
Sandy.Leask@health.nsw.gov.au

Date 11/12/2023

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

Stuarts Point Sewerage Scheme project

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to Figure 1 in Attachment 1).

The proposed project will consist of the installation of a pressure sewerage network ultimately for approximately 1,500 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of 5,345 Equivalent Persons (EP) located to the south of the Stuarts Point township.

The project will include disposal of the treated effluent in the narrow dune system between the Pacific Ocean and Macleay Arm to the northeast of Stuarts Point.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems.

Additionally, the area is in a desirable coastal / estuarine position and includes large areas of appropriately zoned lands (RU5 Village in the *Kempsey Local Environmental Plan 2013*). The construction of a centralised sewerage scheme will remove major constraints to development and promote economic growth and residential development opportunities within the area.

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

The capital investment value of the project is valued at over $30 million and considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *State Environmental Planning Policy (Planning Systems 2021)* (Planning Systems SEPP).

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The SEARs for the project were issued on 21 April 2023 with inputs from (refer to Attachment 2):

- Department of Planning and Environment – Biodiversity and Conservation Division (BCD)
- Department of Primary Industries – Fisheries (DPI – Fisheries)
- Department of Primary Industries – Agriculture (DPI – Agriculture)
- Fire and Rescue NSW (FRNSW)
- Department of Planning and Environment – Water (DPE Water)
- Environment Protection Authority (EPA)
- Heritage NSW
- NSW State Emergency Service (SES)
- Water NSW
- NSW Rural Fire Service (NSW RFS).

This letter has been prepared as an offer for further inputs into the EIS from NSW Health, or discussion on certain matters as described below.

Project description

The proposed Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach (the SPSS localities). The communities comprising the SPSS localities currently rely on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- pressure sewer network
- property collection system
- Stuarts Point WWTP
- effluent transfer pipeline
- effluent disposal area.

The objectives of the project are to:

- provide sewerage infrastructure for the existing residents of SPSS localities
- support and facilitate the planned future residential development across Stuarts Point, Fishermans Reach and Grassy Head
- reduce environmental impacts associated with sewerage management
- eliminate odours and water quality issues associated with existing underperforming onsite sewerage management systems.

Key features of the project include:

- construction of approximately 21.1 kilometres of reticulated pressure pipe and associated ancillary infrastructure (flush pumps, air valves, isolation valves and boundary kits) designed for:
  - transfer of loads up to 1,025 kilolitres per day under average dry weather flow (ADWF) conditions
  - an estimate peak population of 5,345 persons
- mechanical and electrical fit out of the WWTP, including:
  - inlet works

- intermittently decanted extended aeration (IEDA) biological treatment process
- IDEA effluent pump station
- provision for future effluent filtration
- UV disinfection
- effluent disposal pump station
- sludge storage tanks
- mobile sludge dewatering area
- chemical storage and dosing
- odour management
- foul water pump station

- ongoing maintenance activities including inspections, monitoring and repairs as required
- effluent transfer proposed as a trenchless crossing involving horizontal directional drilling (HDD) through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm
- effluent disposal in the dunal area on the eastern area of the Macleay Arm including a short section of riser pipe to bring effluent to the surface to allow surface discharges onto a small area of riprap before flowing onto the ground
- decommissioning of existing redundant on-site sewage management systems including:
  - off-site disposal of the contents of existing on-site treatment systems
- permanent onsite ancillary infrastructure
  - at the WWTP including:
    - staff office
    - operations and control room
    - meeting facilities and staff amenities
    - sealed site road and paths
    - electrical works
    - permanent lighting
    - CCTV
    - security fencing
    - vegetation screen and landscaping
  - security fencing and signage indicating unauthorised access at the effluent disposal area
- temporary construction infrastructure including:
  - site and worker's compound including site parking, office and amenities
  - laydown areas
  - stockpile areas
  - drill pad launch areas
  - temporary fencing.

A maximum five metres buffer has been applied to the sewerage collection system route in which any disturbance associated with the project would be limited (refer to Figure 1 in Attachment 1). This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Construction of the project would involve trenchless underground boring for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence early 2025 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of

approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

The operational lifespan of the project is approximately 50 years. Components of the project will remain in operation until they are either upgraded or become redundant. Prior to decommissioning, a net environmental benefit analysis (NEBA) (or similar) would be undertaken to determine the most appropriate approach to decommissioning and would consider the environmental impacts of removal of the rising main versus the potential benefits of leaving the facilities in-situ.

Key issues for your consideration

The potential health and public safety risks associated with environmental contaminants and the project are predominantly in relation to the proposed effluent transfer and disposal to the narrow dune system.

The EIS will consider the broader community and public health impacts and benefits associated with the project and the net benefit the project will have through the removal of the existing septic systems and introduction of a controlled sewerage treatment system that would be managed by Council.

The EPA will set the criteria for discharge quality at the effluent disposal site and the EIS will consider the potential impacts on waterways and surrounding land, particularly in relation to discharge of treated effluent and receiving water body mixing zones.

Other issues that will be assessed as part of the EIS in relation to potential public amenity impacts include impacts on air quality, particularly in relation to odour.

SEARs for the project have included the requirement for a Health Impact Assessment in accordance with current guidelines (see SEAR 60 in Attachment 2).

We would like to engage with NSW Health to determine scope of Health Impact Assessment required for the project.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project and assessment of impacts, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by 22 December 2023.

Should you wish to further discuss or provide comment please do not hesitate to contact myself on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
3184321 - Hunter IA

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Sandy Leask <Sandy.Leask@health.nsw.gov.au>
Sent: Monday, 11 December 2023 11:51 AM
To: Charyssa Lawrence; Shaun Taylor
Cc: MNCLHD-NCPHU-EHO; HSSG-WaterQual
Subject: FW: Stuarts Point Sewerage Scheme project: Request for NSW Health Input
Attachments: 318001851 Final Letter_v1.0_231211_NSW Health.pdf

Categories: Filed by Mail Manager

> You don't often get email from sandy.leask@health.nsw.gov.au. Learn why this is important

Hello Charyssa and Sean

Thank you for sharing this letter. I am sharing it with my colleagues in the Water Unit who deal with wastewater projects.

Can you please tell me if this letter has been shared with the local Public Health Unit? They should be the first point of contact in NSW Health for questions of this kind. You can reach the PHU at this email address: MNCLHD-NCPHU-EHO MNCLHD-NCPHU-EHO@health.nsw.gov.au (copied to this message).

Thanks again

Sandy

Sandy Leask

Senior Policy Advisor, Water Unit
Environmental Health Branch
NSW Health
Street Address - 1 Reserve Rd ST LEONARDS 2065
Postal Address - Locked Bag 2030 ST LEONARDS NSW 1590
Tel. 02 9391 9893 | Fax. 02 9391 9960 | Mob. 0402 703 928 | sandy.leask@health.nsw.gov.au
http://www.health.nsw.gov.au/environment/water/Pages/default.aspx
Water Unit on-call 02 9391 9939 | 0491 227 423 (no SMS)

NSW GOVERNMENT | Health

From:
Sent: Monday, December 11, 2023 10:14 AM
To: Sandy Leask <Sandy.Leask@health.nsw.gov.au>
Cc:
Subject: Stuarts Point Sewerage Scheme project: Request for NSW Health Input

> You don't often get email from clawrence@ramboll.com. Learn why this is important

Hi Sandy,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a

pressure sewerage network ultimately for approximately 1,500 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of 5,345 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with NSW Health is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The attached letter has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by 22 December 2023.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons 1)
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Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

ENVIRONMENT
& HEALTH

NSW Health
PO Box 498 (31 Uralba Street)
Lismore NSW 2480
Attention: North coast local health district
MNCLHD-NCPHU-EHO@health.nsw.gov.au

Date 11/12/2023

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

Stuarts Point Sewerage Scheme project

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to Figure 1 in Attachment 1).

The proposed project will consist of the installation of a pressure sewerage network ultimately for approximately 1,500 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of 5,345 Equivalent Persons (EP) located to the south of the Stuarts Point township.

The project will include disposal of the treated effluent in the narrow dune system between the Pacific Ocean and Macleay Arm to the northeast of Stuarts Point.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems.

Additionally, the area is in a desirable coastal / estuarine position and includes large areas of appropriately zoned lands (RU5 Village in the *Kempsey Local Environmental Plan 2013*). The construction of a centralised sewerage scheme will remove major constraints to development and promote economic growth and residential development opportunities within the area.

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

The capital investment value of the project is valued at over $30 million and considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *State Environmental Planning Policy (Planning Systems 2021)* (Planning Systems SEPP).

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- Heritage NSW
- NSW State Emergency Service (SES)
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This letter has been prepared as an offer for further inputs into the EIS from NSW Health, or discussion on certain matters as described below.

Project description

The proposed Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach (the SPSS localities). The communities comprising the SPSS localities currently rely on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- pressure sewer network
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- effluent transfer pipeline
- effluent disposal area.

The objectives of the project are to:

- provide sewerage infrastructure for the existing residents of SPSS localities
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Key features of the project include:

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  - transfer of loads up to 1,025 kilolitres per day under average dry weather flow (ADWF) conditions
  - an estimate peak population of 5,345 persons
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- provision for future effluent filtration
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- sludge storage tanks
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- chemical storage and dosing
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- foul water pump station

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- effluent transfer proposed as a trenchless crossing involving horizontal directional drilling (HDD) through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm
- effluent disposal in the dunal area on the eastern area of the Macleay Arm including a short section of riser pipe to bring effluent to the surface to allow surface discharges onto a small area of riprap before flowing onto the ground
- decommissioning of existing redundant on-site sewage management systems including:
  - off-site disposal of the contents of existing on-site treatment systems
- permanent onsite ancillary infrastructure
  - at the WWTP including:
    - staff office
    - operations and control room
    - meeting facilities and staff amenities
    - sealed site road and paths
    - electrical works
    - permanent lighting
    - CCTV
    - security fencing
    - vegetation screen and landscaping
  - security fencing and signage indicating unauthorised access at the effluent disposal area
- temporary construction infrastructure including:
  - site and worker's compound including site parking, office and amenities
  - laydown areas
  - stockpile areas
  - drill pad launch areas
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A maximum five metres buffer has been applied to the sewerage collection system route in which any disturbance associated with the project would be limited (refer to Figure 1 in Attachment 1). This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

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Construction of the project is anticipated to commence early 2025 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of

approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

The operational lifespan of the project is approximately 50 years. Components of the project will remain in operation until they are either upgraded or become redundant. Prior to decommissioning, a net environmental benefit analysis (NEBA) (or similar) would be undertaken to determine the most appropriate approach to decommissioning and would consider the environmental impacts of removal of the rising main versus the potential benefits of leaving the facilities in-situ.

Key issues for your consideration

The potential health and public safety risks associated with environmental contaminants and the project are predominantly in relation to the proposed effluent transfer and disposal to the narrow dune system.

The EIS will consider the broader community and public health impacts and benefits associated with the project and the net benefit the project will have through the removal of the existing septic systems and introduction of a controlled sewerage treatment system that would be managed by Council.

The EPA will set the criteria for discharge quality at the effluent disposal site and the EIS will consider the potential impacts on waterways and surrounding land, particularly in relation to discharge of treated effluent and receiving water body mixing zones.

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SEARs for the project have included the requirement for a Health Impact Assessment in accordance with current guidelines (see SEAR 60 in Attachment 2).

We would like to engage with NSW Health to determine scope of Health Impact Assessment required for the project.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project and assessment of impacts, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by 22 December 2023.

Should you wish to further discuss or provide comment please do not hesitate to contact myself on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
3184321 - Hunter IA

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: David Basso (Mid North Coast LHD) <David.Basso@health.nsw.gov.au> on behalf of MNCLHD-NCPHU-EHO <MNCLHD-NCPHU-EHO@health.nsw.gov.au>
Sent: Friday, 10 May 2024 2:59 PM
To: Tawna Krause; Shaun Taylor
Cc: MNCLHD-NCPHU-EHO
Subject: FW: Stuarts Point Sewerage Scheme project: Request for North Coast Local Health District input follow up
Attachments: Stuarts Point Sewerage Scheme project: Request for North Coast Local Health District; 20230320RE Extension request re SSD-56884966 Stuarts Pt Sewerage Scheme .msg

Dear Tawna and Shaun,

Hope you're both well.

Apologies for the delay in responding to your correspondence.

As mentioned in my message earlier Shaun, we don't have anything specific to add over and above what's contained in the SEARS and your project report. We provided advice to Planning NSW last year in relation to the proposed Health Impact Assessment. Please see attached.

Hope this is of assistance and please let me know f you require further information.

Best,

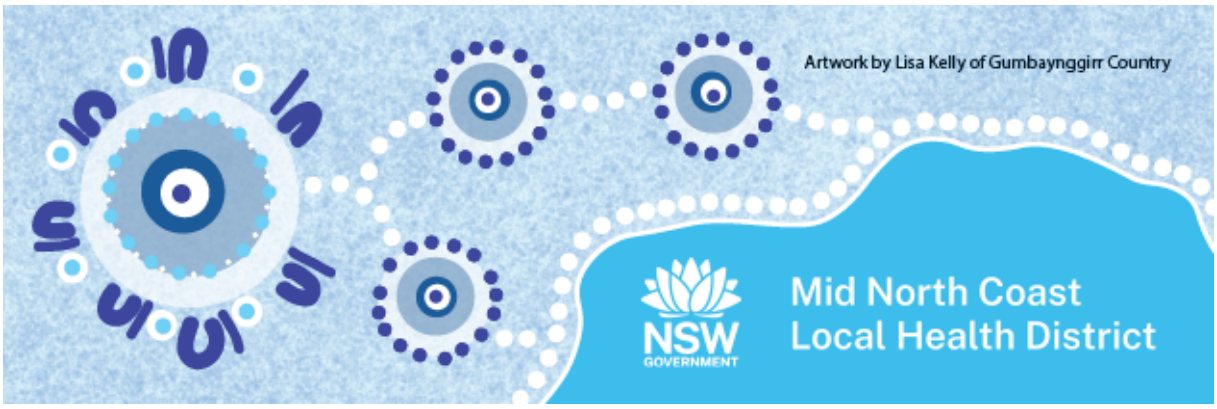
db

David Basso

Environmental Health Officer

P 02 6589 2144
M 0417 695 113
E David.Basso@health.nsw.gov.au
EH Team email - MNCLHD-NCPHU-EHO@health.nsw.gov.au
After Hours – 5pm – 8:30am – 0428 882 805 **(no SMS)**
A PO Box 126 Port Macquarie
North Coast Population and Public Health Directorate

Work hours - 730am – 400pm



I acknowledge the traditional custodians of the land on which I live and work and pay my respects to Elders both past & present

Classification: Confidential

From: Tawna Krause <TKRAUSE@ramboll.com>
Sent: Monday, April 22, 2024 3:11 PM
To: MNCLHD-NCPHU-EHO <MNCLHD-NCPHU-EHO@health.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>; Charyssa Lawrence <CLAWRENCE@ramboll.com>
Subject: Stuarts Point Sewerage Scheme project: Request for North Coast Local Health District input follow up

To whom it may concern,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

We have previously tried to consult with the North Coast Local Health District concerning the Stuarts Point Sewerage Scheme Project. Our initial consultation, see **attached email**, was provided on 11 December 2023, and has not been received with a response to date. Could you please confirm you have received the letter and provide an estimated timeframe of your response in accordance with below.

It is requested that you please provide feedback by **13 May 2024**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Thanks,

Tawna Krause

B. Env. Sci and Mgmt
Senior Environmental Planner
IA

D +61 2 9954 8176
tkrause@ramboll.com

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

State Government Agency Consultation Record

National Parks and Wildlife Services

RAMBOLL

ENVIRONMENT
& HEALTH

NSW National Parks and Wildlife Service
Kempsey Office and Depot:
247 Old Station Road
Verges Creek, NSW 2440

Attention: National Parks and Wildlife Service representative
npws.hastingsmacleay@environment.nsw.gov.au
parks.info@environment.nsw.gov.au

Stuarts Point Sewerage Scheme project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

The project would consist of the installation of a low-pressure sewer network to service approximately 540 properties across Stuarts Point, Grassy Head and Fishermans Reach, and would include the individual property connection system infrastructure required to connect existing properties into the low-pressure sewer network. Treatment of the collected wastewater would be supplied by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) per day located to the south of Stuarts Point township.

The project would include disposal of the treated effluent in the narrow dune system between the Tasman Sea and Macleay Arm to the east of Stuarts Point. Effluent would be transferred to the effluent disposal area via an effluent transfer pipeline inclusive of 450 metres of pipework installed beneath the Macleay Arm via trenchless underground boring.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems. Additionally, the area is planned for future residential development and as such, a revised sewer strategy is required to accommodate the increasing loads.

The estimated development cost of the project is valued at over $55.5 million. The project is therefore considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* and the *State Environmental Planning Policy (Planning Systems 2021)*.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

SEARs for the project were issued on 21 April 2023 (refer to **Attachment 2**) and require consultation with:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW) – Conservation Programs, Heritage & Regulation Group (DCCEEW CPHR)
- DCCEEW– Water Group (DCCEEW Water)
- Department of Primary Industries (DPI) – Fisheries (DPI – Fisheries)
- DPI – Agriculture (DPI – Agriculture)
- NSW Environment Protection Authority (NSW EPA)
- National Parks and Wildlife Services (NPWS)
- NSW Health
- Heritage NSW
- Water NSW
- Transport for NSW (TfNSW)
- Crown lands
- Fire and Rescue NSW (FRNSW)
- NSW State Emergency Service (NSW SES)
- NSW Rural Fire Service (NSW RFS).

As required by the SEARs, consultation with NPWS is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach. These communities are currently relying on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- wastewater collection and transfer system:
  - low pressure sewer network
  - property collection systems
- Stuarts Point Wastewater Treatment Plant (WWTP)
- treated effluent disposal system:
  - treated effluent pipeline
  - dunal discharge

The objectives of the project are to:

- provide a centralised and modern wastewater system for the communities of Stuarts Points, Fishermans Reach and Grassy Head
- improve the flood resilience of Stuarts Point and surrounds through the removal of onsite sewage management systems
- enable planned population growth and economic development across the Stuarts Point, Fishermans Reach and Grassy Head
- reduce the environmental impact to the local groundwater aquifer from pollution events associated with the underperforming onsite sewage management systems

Wastewater Collection and Transfer System

The key elements of the wastewater collection and transfer system would be the low-pressure sewer network and the property collection systems.

Low-pressure sewer network

The low-pressure sewer network would transfer wastewater generated from residential, commercial and industrial properties within the scheme area spanning Grassy Head, Stuarts Point and Fishermans Reach to the Stuarts Point WWTP via a network of low-pressure sewer main systems.

The main construction method for pipes will be trenchless underground boring using horizontal directional drilling (HDD), which requires significantly less surface disturbance compared to traditional trenching methods. This involves establishing discrete drill sites with shallow entry pits for a surface launched drill to install the pipe through the subsurface in a shallow arc and linking sections approximately every 100 metres as required for valve placements, drill exit sites and pipe joining.

Where the under boring equipment needs to be established or two sections of under bored pipe needs joining and native vegetation disturbance is unavoidable, or where under boring is not an option and trenching is required, vegetation removal with a maximum clearance corridor of five metres may be required. This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Operation of the sewer network would see the network continually transfer wastewater to the WWTP and would involve routine maintenance to address blockages and leaks.

Property collection systems

The property collection systems comprise the infrastructure required to connect the residential and commercial properties in the scheme area to the low-pressure sewer network. The final design and installation of the property connection systems would be undertaken in consultation with property owners during a property audit that would be undertaken by specialist auditors.

Stuarts Point WWTP

The WWTP would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes with disinfection.

Construction of the WWTP would involve bulk earthworks, building of the plant, installation of treatment processes, and installation of services. The WWTP would continuously operate, with up to three staff attending daily operations comprising regular monitoring and maintenance of treatment processes to maintain compliance with effluent quality criteria.

Treated Effluent Disposal System

The treated effluent disposal system comprises the treated effluent pipeline and the dunal discharge.

Treated effluent pipeline

The treated effluent pipeline would be located within Lot 1 DP1284907 (the WWTP site), the road reserve and part Lot 7300 DP115278 (the dunal discharge site) and comprise approximately 2.7 kilometres of pipework to transfer tertiary treated and disinfected effluent from the WWTP to the dunal discharge area.

The treated effluent pipeline crossing of the Macleay Arm is proposed as a trenchless crossing design involving HDD through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm. This major underbore would be undertaken via the establishment of a major underbore entry site on the corner of Kimpton Street and Marine Parade in Stuarts Point (west of the Macleay Arm) and the establishment of a major underbore exit site within the southern area of the land proposed for the dunal discharge (east of the Macleay Arm).

Operation of the treated effluent pipeline will include routine maintenance to maintain the transfer of tertiary treated and disinfected effluent from the Stuarts Point WWTP to the dunal discharge.

Dunal discharge

The dunal discharge involves the discharge of treated effluent through the dunal system on the eastern side of the Macleay Arm within part Lot 7300 DP115278 via surface irrigation. Construction of the dunal discharge would involve vegetation clearance and installation of surface irrigation pipework, ancillary infrastructure and the erection of security fencing and signage. Construction vehicles and machinery would access the dunal discharge site along the beach, from the authorised beach access at the Grassy Head Holiday Park.

Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

National Park Estate

The Yarriabini National Park is located approximately 1.5 kilometres to the east of the project, and the Yarrahapinni Wetlands National Park is approximately 1.2 kilometres to the southwest of Fishermans Reach.

A Land Use Conflict Risk Assessment (LUCRA) is being undertaken in consideration to the *Land Use Conflict Risk Assessment Guide* (DPI, 2011) which will consider the project's impact on these national parks, and additionally the Fishermans Bend Nature Reserve and the Clybucca Aboriginal Area and historic site.

The LUCRA will involve completing a desktop review of background information using publicly available registers and information to identify existing land uses in the area. It will incorporate outcomes from community and stakeholder consultation which may provide additional information on current land uses that may not have been part of the publicly available information.

Aboriginal cultural heritage

The project area is within the Kempsey Local Aboriginal Land Council (LALC) boundaries. Assessments conducted in 2021 at the proposed WWTP site and dunal discharge site concluded there was no evidence of Aboriginal Cultural activity.

However, the project is close to known cultural heritage sites. A search in the Aboriginal Heritage Information Management Systems (AHIMS) indicated that six Aboriginal sites were recorded in or near the project location. The southern extent of the project in Fishermans Reach is close to the northern extent of the Clybucca Aboriginal Area. This contains the largest midden in the Southern Hemisphere and has cultural and spiritual significance to the local indigenous community.

Additionally, parts of the project are classified as archaeologically sensitive landscape as defined in the *Due Diligence Code of Practice* (Department of Environment, Climate Change and Water, 2010).

Due to the proximity of known cultural heritage sites, an ACHAR will be prepared in accordance with:

- *The Guide to Assessing Investigating and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010).

To date, the ACHAR included a survey which was undertaken over the project area over a period of two days, to which registered Aboriginal parties (RAP) were invited to attend. This will provide a robust level of survey effort in consultation with the local community to adequately assess the project area to a level Heritage NSW require for projects of this scale.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Shane Robinson <Shane.Robinson@environment.nsw.gov.au>
Sent: Tuesday, 29 July 2025 8:12 AM
To: Charyssa Lawrence; Shaun Taylor
Cc: NPWS Area Mailbox - Hastings Macleay; Piers Thomas
Subject: RE: FEEDBACK Due 14 Aug: Stuarts Point Sewerage Scheme: Request for NSW NPWS Input [Filed 29 Jul 2025 08:15]

Categories: Filed by Mail Manager

Hi Charyssa and Shaun,

Thank you for your email and letter about the proposed Stuarts Point Sewage Scheme.

NPWS has no further comments at this stage.

Regards,

Shane

Shane Robinson
Area Manager, Hastings Macleay
North Coast Branch
NSW National Parks and Wildlife Service
Birpai/Biripi & Dunghutti/Thunggutti Country

22 Blackbutt Road
Port Macquarie NSW 2444
T 02 6588 5555
W nationalparks.nsw.gov.au

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Thursday, July 24, 2025 11:06 AM
To: NPWS Area Mailbox - Hastings Macleay <npws.hastingsmacleay@environment.nsw.gov.au>; NPWS Parks Info Mailbox <parks.info@environment.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>
Subject: Stuarts Point Sewerage Scheme: Request for NSW NPWS Input

To whom it may concern,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with NSW National Parks and Wildlife Service is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The attached letter has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com
_____

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300

https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

:

State Government Agency Consultation Record

Transport for NSW

RAMBOLL

ENVIRONMENT
& HEALTH

Transport for New South Wales
231 Elizabeth Street
Sydney, NSW 2000

Attention: Court Walsh
Email: development.north@transport.nsw.gov.au

Stuarts Point Sewerage Scheme project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

The project would consist of the installation of a low-pressure sewer network to service approximately 540 properties across Stuarts Point, Grassy Head and Fishermans Reach, and would include the individual property connection system infrastructure required to connect existing properties into the low-pressure sewer network. Treatment of the collected wastewater would be supplied by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) per day located to the south of Stuarts Point township.

The project would include disposal of the treated effluent in the narrow dune system between the Tasman Sea and Macleay Arm to the east of Stuarts Point. Effluent would be transferred to the effluent disposal area via an effluent transfer pipeline inclusive of 450 metres of pipework installed beneath the Macleay Arm via trenchless underground boring.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems. Additionally, the area is planned for future residential development and as such, a revised sewer strategy is required to accommodate the increasing loads.

The estimated development cost of the project is valued at over $55.5 million. The project is therefore considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* and the *State Environmental Planning Policy (Planning Systems 2021)*.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

Ramboll Australia Pty Ltd.
ACN 095 437 442
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SEARs for the project were issued on 21 April 2023 (refer to **Attachment 2**) and require consultation with:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW) – Conservation Programs, Heritage & Regulation Group (DCCEEW CPHR)
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As required by the SEARs, consultation with TfNSW is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach. These communities are currently relying on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- wastewater collection and transfer system:
  - low pressure sewer network
  - property collection systems
- Stuarts Point Wastewater Treatment Plant (WWTP)
- treated effluent disposal system:
  - treated effluent pipeline
  - dunal discharge

The objectives of the project are to:

- provide a centralised and modern wastewater system for the communities of Stuarts Points, Fishermans Reach and Grassy Head
- improve the flood resilience of Stuarts Point and surrounds through the removal of onsite sewage management systems
- enable planned population growth and economic development across the Stuarts Point, Fishermans Reach and Grassy Head
- reduce the environmental impact to the local groundwater aquifer from pollution events associated with the underperforming onsite sewage management systems

Wastewater Collection and Transfer System

The key elements of the wastewater collection and transfer system would be the low-pressure sewer network and the property collection systems.

Low-pressure sewer network

The low-pressure sewer network would transfer wastewater generated from residential, commercial and industrial properties within the scheme area spanning Grassy Head, Stuarts Point and Fishermans Reach to the Stuarts Point WWTP via a network of low-pressure sewer main systems.

The main construction method for pipes will be trenchless underground boring using horizontal directional drilling (HDD), which requires significantly less surface disturbance compared to traditional trenching methods. This involves establishing discrete drill sites with shallow entry pits for a surface launched drill to install the pipe through the subsurface in a shallow arc and linking sections approximately every 100 metres as required for valve placements, drill exit sites and pipe joining.

Where the under boring equipment needs to be established or two sections of under bored pipe needs joining and native vegetation disturbance is unavoidable, or where under boring is not an option and trenching is required, vegetation removal with a maximum clearance corridor of five metres may be required. This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Operation of the sewer network would see the network continually transfer wastewater to the WWTP and would involve routine maintenance to address blockages and leaks.

Property collection systems

The property collection systems comprise the infrastructure required to connect the residential and commercial properties in the scheme area to the low-pressure sewer network. The final design and installation of the property connection systems would be undertaken in consultation with property owners during a property audit that would be undertaken by specialist auditors.

Stuarts Point WWTP

The WWTP would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes with disinfection.

Construction of the WWTP would involve bulk earthworks, building of the plant, installation of treatment processes, and installation of services. The WWTP would continuously operate, with up to three staff attending daily operations comprising regular monitoring and maintenance of treatment processes to maintain compliance with effluent quality criteria.

Treated Effluent Disposal System

The treated effluent disposal system comprises the treated effluent pipeline and the dunal discharge.

Treated effluent pipeline

The treated effluent pipeline would be located within Lot 1 DP1284907 (the WWTP site), the road reserve and part Lot 7300 DP115278 (the dunal discharge site) and comprise approximately 2.7 kilometres of pipework to transfer tertiary treated and disinfected effluent from the WWTP to the dunal discharge area.

The treated effluent pipeline crossing of the Macleay Arm is proposed as a trenchless crossing design involving HDD through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm. This major underbore would be undertaken via the establishment of a major underbore entry site on the corner of Kimpton Street and Marine Parade in Stuarts Point (west of the Macleay Arm) and the establishment of a major underbore exit site within the southern area of the land proposed for the dunal discharge (east of the Macleay Arm).

Operation of the treated effluent pipeline will include routine maintenance to maintain the transfer of tertiary treated and disinfected effluent from the Stuarts Point WWTP to the dunal discharge.

Dunal discharge

The dunal discharge involves the discharge of treated effluent through the dunal system on the eastern side of the Macleay Arm within part Lot 7300 DP115278 via surface irrigation. Construction of the dunal discharge would involve vegetation clearance and installation of surface irrigation pipework, ancillary infrastructure and the erection of security fencing and signage. Construction vehicles and machinery would access the dunal discharge site along the beach, from the authorised beach access at the Grassy Head Holiday Park.

Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

Road traffic network impacts

Access to the project would be Stuarts Point Road, the main route connecting Stuarts Point and the other communities with the Pacific Highway. Other roads, including Grassy Head Road and Fishermans Reach Road would also be used to access various project elements. None of these roads form part of the state road network.

During construction up to 15 heavy vehicle and 40 light vehicle movements per day are expected. During operations, up to 10 heavy vehicles are expected per month for bulk transfer chemical delivery and de-watered sludge removal and up to four light vehicle movements are expected per day.

A Traffic Impact Assessment (TIA) is being undertaken in accordance with the *Austroads Guide to Traffic Management Part 12 2020*, *Transport for NSW (TfNSW) Supplement*, and *RTA Guide to Traffic Generating Developments,* to provide a review of existing traffic and transport conditions, network safety and operational performance to quantify potential traffic impacts generated by the project. The TIA will also identify types and volumes of oversize and over mass (OSOM) key access routes, construction access routes, logistics route analysis, emergency vehicle access, and mitigation measures including road and intersection upgrades (if required).

Traffic data used to inform the TIA has been sourced from Council's mid-block traffic count database as well as a traffic survey undertaken by the TIA consultant. The traffic survey involved an intersection count on the at the Stuarts Point / Grassy Head Road intersection.

The key access routes within the project area are displayed in Attachment 1 and would be:

- Ocean Avenue and Marine Parade (within Stuarts Point)
- Grassy Head Road (from Stuarts Point to Grassy Head)
- Fishermans Reach Road (from Stuarts Point to Fishermans Reach)
- The existing 4WD access track along Stuarts Point beach (between Grassy Head Caravan Park and the effluent disposal area)
- The pedestrian footbridge and access track east of Stuarts Point Caravan Park

Maritime impacts

The project involves the installation of 450 metres of pipework beneath the Macleay Arm via trenchless underground boring to deliver treated effluent to the effluent disposal area located within an area within the coastal dunes between the Macleay Arm and the Pacific Ocean. Construction of the infrastructure at the proposed effluent disposal site would require light four-wheel drive vehicles or plant to access the site along the unsealed beach access via Grassy Head Holiday Park. Alternative access to the site includes the existing pedestrian bridge and access track on the eastern side of Macleay Arm which would be maintained for operational access.

Council has investigated options around utilising the boat ramp near the pedestrian bridge on the eastern side of the Macleay Arm and transporting construction phase infrastructure across to the dunal discharge area via boat or barge arrangements in the event that the beach access is unavailable. This construction access option is least favourable compared to the access options described above, however, Ramboll still seeks comments on any potential impacts to navigable waterways if Council decides to proceed with this arrangement.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Development North <Development.North@transport.nsw.gov.au>
Sent: Thursday, 31 July 2025 12:03 PM
To: staylor@ramboll.com.
Cc: Charyssa Lawrence
Subject: RE: Stuarts Point Sewerage Scheme: Request for TfNSW Input [Filed 31 Jul 2025 12:34]
Attachments: NTH23_00169_01 - 20230405 - TfNSW Response - SSD-56884966 - SEARs - Stuarts Point Sewerage Scheme - Fishermans Reach Road Stuarts Point.pdf

Categories: Filed by Mail Manager

Hi Shaun,

Thanks for reaching out to Transport for New South Wales (TfNSW) regarding a pre-EIS consultation enquiry for a State Significant Development (SSD-56884966).

TfNSW has no further comment in addition to the previous response sent to DPHI under the SEARs process. Attached is the response for your attention.

Regards,

Masa Kimura
Development Services Case Officer
Transport Planning | Planning Integration & Passenger
Transport for NSW

T 1300 207 783 **M** 0407 707 999 **E** masa.kimura@transport.nsw.gov.au

transport.nsw.gov.au

6 Stewart Avenue, Newcastle NSW 2302
Locked Bag 2030, Newcastle NSW 2302

Working days Monday to Friday, 8:00am – 3:30pm

OFFICIAL

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Thursday, 24 July 2025 11:20 AM
To: Development North <Development.North@transport.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>
Subject: Stuarts Point Sewerage Scheme: Request for TfNSW Input

Allocate to Masa

Hi Court,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with Transport for NSW (TfNSW) is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The attached letter has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

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Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300

https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

Transport for NSW

5 April 2023

File No: NTH23/00169/01
Your Ref: SSD-56884966

The Director
Department of Planning & Environment
NSW Major Projects Portal

Attention: Drew Anderson - Drew.Anderson@dpie.nsw.gov.au

RE: Secretary's Environmental Assessment Requirements for Stuarts Point Sewerage Scheme - Fishermans Reach Road Stuarts Point

I refer to your email of 29 March 2023 requesting input from Transport for NSW to the Secretary's Environmental Assessment Requirements (SEARs) for the abovementioned development proposal.

Roles and Responsibilities

Our key interests are the safety and efficiency of the transport network, the needs of our customers and the integration of land use and transport in accordance with the *Future Transport Strategy*.

Pacific Highway (HW10) is a classified State road and Stuarts Point Road (MR7740) is an unclassified Regional Road. Council is the roads authority for all public roads in the area, in accordance with Section 7 of the *Roads Act 1993*.

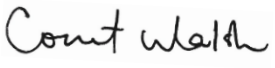
Where the proposed effluent transfer and disposal method of construction is "direct lay" and/or comprising a fixed structure in navigable waters, then the proponent would require approval from Transport for NSW (NSW Maritime) as prescribed by Section 2.15 from the *State Environmental Planning Policy (Transport and Infrastructure) 2021.*
Note: TfNSW Navigation Advice North section prefers the use of trenchless technology.

Transport for NSW Response

TfNSW requests that a Traffic Impact Assessment (TIA) be prepared by suitably qualified person/s in accordance with the Austroads Guide to Traffic Management Part 12, the complementary TfNSW Supplement and RTA Guide to Traffic Generating Developments. The TIA should include, but not necessarily be limited to, an assessment of the considerations outlined in **Attachment A**.

If you have any further enquiries regarding the above comments please do not hesitate to contact Masa Kimura, Development Services Case Officer or the undersigned on 1300 207 783 or via email at: development.north@transport.nsw.gov.au

Yours faithfully,



Court Walsh
Acting Team Leader, Development Services
Community and Place | Region North
Regional & Outer Metropolitan

Enc. ATTACHMENT A - Requested TIA consideration for SEAR

ATTACHMENT A - Traffic Impact Assessment – Requested considerations for SEAR

For context, this attachment must be read with TfNSW letter of 5 April 2023 reference number NTH23/00169/01

Traffic Impact Assessment (TIA) be prepared by suitably qualified person/s in accordance with the Austroads Guide to Traffic Management Part 12, the complementary TfNSW Supplement and RTA Guide to Traffic Generating Developments.

The TIA is to identify the impacts of the development and the proposed on-site and off-site measures proposed to mitigate the impacts of the development on any road or rail related infrastructure. The TIA must explain and justify all inputs informing the proposed mitigation measures and TIA conclusions.

The TIA should be tailored to the scope of the proposed development and include, but not necessarily be limited to, consideration of the following during construction of the sewer treatment facility.

- Heavy vehicle and OSOM routes:
  - Identify all types of heavy and OSOM vehicles to be used by the project.
  - Undertake a logistics route analysis which includes the Stuart Point Interchange:
    - Details of the road geometry and alignment along the identified transport route/s, including existing formations, crossings, intersection treatments and any identified hazards. This should include;
      - Available sight distances at the site access and nearby intersections and any constraint to achieving the required sight distance for the posted speed limit.
      - An assessment of turn treatment warrants in accordance with the *Austroads Guide to Traffic Management Part 6* and *Austroads Guide to Road Design Part 4A* for intersections along the identified transport route/s, identifying the existence of the minimum basic turn treatments and addressing the need for any warranted higher order treatments.
      - Swept path analysis demonstrating the largest design vehicle entering and leaving the development, and moving in each direction through intersections along the proposed transport route/s.

        The design vehicle templates used with the swept path analysis software are also requested in order for TfNSW to review the performance within the software (e.g. Autodesk Vehicle Tracking or Transoft AutoTURN).
    - Highlighting each at-risk road structures that the haulage route crosses including bridges, traffic signals, signage, major culverts, and minor culverts that may not meet the desirable cover to cater for proposed axle loads.
    - National Heavy Vehicle Regulator (NHVR) approved routes identified on the Restricted Access Maps (RAV MAP) are to be utilised for the heavy vehicle routes for the proposed development.

- A map of the surrounding road network identifying the site access, nearby accesses, intersections and transport related facilities.
- A map of the proposed transport route/s identifying all public roads proposed to obtain access from the classified (State) road/s to the development site.
- The total impact of existing and proposed development on the road network with consideration for a 10 year horizon. This should include;
  - Identify Annual Average Daily Traffic (AADT) volumes with percentage heavy vehicles along the transport route/s and diagrammatically demonstrate AM and PM peak hour movements at key intersections.
  - Background traffic data from published sources and/or recent survey data. The source of data and any assumptions are to be clearly explained and justified, including the growth rate applied to the future horizon. Due to the impact of COVID-19 on travel patterns, traffic counts undertaken at this time may not be representative of normal volumes. Alternative approaches to understanding the impact of COVID-19 on traffic patterns should be discussed with TfNSW.
  - The volume and distribution of existing and proposed trips to be generated by the construction, operational and decommission phases of the development. This should identify the maximum daily and hourly demands generated by the development, particularly where they coincide with the network peak hour.
  - The type and frequency of design vehicles accessing the development site.
- Details of the road geometry and alignment along the identified transport route/s, including existing formations, crossings, intersection treatments and any identified hazards. This should include;
  - Available sight distances at the site access and nearby intersections and any constraint to achieving the required sight distance for the posted speed limit.
  - Available sight distances at intersections along the proposed transport routes and any constraint to achieving the required sight distance for the posted speed limit.
  - An assessment of turn treatment warrants in accordance with the Austroads Guide to Traffic Management Part 6 and Austroads Guide to Road Design Part 4A for intersections along the identified transport route/s, identifying the existence of the minimum basic turn treatments and addressing the need for any warranted higher order treatments.
  - Swept path analysis demonstrating the largest construction design vehicle entering and leaving the development, and moving in each direction through intersections along the proposed transport route/s.
- Capacity analysis using SIDRA or other relevant application, to identify an acceptable Level of Service (LOS) at intersections with the classified (State) road/s, and where relevant, analysis of any other intersections along the proposed transport route/s.
- A review of crash data along the identified transport route/s for the most recent 5 year reporting period and an assessment of road safety along the proposed transport route/s considering the safe systems principles adopted under Future Transport 2056.
- Strategic (2D) design drawings of all proposed road works and the site access demonstrating scope, estimated cost and constructability of works required to mitigate the impacts of the development on road safety, traffic efficiency and the integrity of transport infrastructure. Works must be appropriately designed for the existing posted speed limit.

- Site plan demonstrating site access, internal manoeuvring, servicing and parking areas consistent with the relevant parts of AS2890 and Council requirements.
- Details of measures to address impacts and/or provide connections for public transport services and active transport modes, such as, public and school bus services, walking and cycling.
- Details of measures to ameliorate the impacts of road traffic noise, dust, and/or glare generated along the proposed transport route/s.
- Details of any Traffic Management Plan (TMP) proposed to address the construction and operation phases of the proposed development. The TMP should be prepared and implemented in accordance with *Australian Standard 1742.3* and the *Work Health and Safety Regulation 2017.* It is recommended that any TMP include, but not necessarily limited to, the following;
  - A map of the primary transport route/s highlighting critical locations.
  - An induction process for vehicle operators and regular toolbox meetings.
  - Procedures for travel through residential areas, school zones and/or bus route/s.
  - any proposed temporary measures such a Traffic Guidance Scheme (TGS)
  - A Driver Code of Conduct for heavy vehicle operators.
  - A complaint resolution and disciplinary procedure.

Community consultation measures proposed for peak periods.

Where road safety concerns are identified at a specific location along the proposed haulage routes, TfNSW suggests that the TIA be supported by a targeted Road Safety Audit undertaken by suitably qualified persons in accordance with the Austroads Guidelines.

Any roadwork on classified State road/s is to be designed and constructed in accordance with the current Austroads Guidelines, Australian Standards and TfNSW Supplements.

The developer will be required to enter into a Works Authorisation Deed (WAD) with TfNSW for any roadwork deemed necessary on the classified (State) road. The developer will be responsible for all costs associated with the roadwork and administration for the WAD. It is recommended that developers familiarise themselves with the requirements of the WAD process. Further information can be obtained from the TfNSW website.

State Government Agency Consultation Record

Heritage NSW

RAMBOLL

ENVIRONMENT
& HEALTH

Heritage NSW
Locked Bag 5022
Parramatta, NSW 2124

Attention: Rebecca Yit
Email: rebecca.yit@environment.nsw.gov.au

Stuarts Point Sewerage Scheme project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

The project would consist of the installation of a low-pressure sewer network to service approximately 540 properties across Stuarts Point, Grassy Head and Fishermans Reach, and would include the individual property connection system infrastructure required to connect existing properties into the low-pressure sewer network. Treatment of the collected wastewater would be supplied by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) per day located to the south of Stuarts Point township.

The project would include disposal of the treated effluent in the narrow dune system between the Tasman Sea and Macleay Arm to the east of Stuarts Point. Effluent would be transferred to the effluent disposal area via an effluent transfer pipeline inclusive of 450 metres of pipework installed beneath the Macleay Arm via trenchless underground boring.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems. Additionally, the area is planned for future residential development and as such, a revised sewer strategy is required to accommodate the increasing loads.

The estimated development cost of the project is valued at over $55.5 million. The project is therefore considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* and the *State Environmental Planning Policy (Planning Systems 2021)*.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

SEARs for the project were issued on 21 April 2023 (refer to **Attachment 2**) and require consultation with:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW) – Conservation Programs, Heritage & Regulation Group (DCCEEW CPHR)
- DCCEEW– Water Group (DCCEEW Water)
- Department of Primary Industries (DPI) – Fisheries (DPI – Fisheries)
- DPI – Agriculture (DPI – Agriculture)
- NSW Environment Protection Authority (NSW EPA)
- National Parks and Wildlife Services (NPWS)
- NSW Health
- Heritage NSW
- Water NSW
- Transport for NSW (TfNSW)
- Crown lands
- Fire and Rescue NSW (FRNSW)
- NSW State Emergency Service (NSW SES)
- NSW Rural Fire Service (NSW RFS).

As required by the SEARs, consultation with Heritage NSW is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach. These communities are currently relying on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- wastewater collection and transfer system:
  - low pressure sewer network
  - property collection systems
- Stuarts Point Wastewater Treatment Plant (WWTP)
- treated effluent disposal system:
  - treated effluent pipeline
  - dunal discharge

The objectives of the project are to:

- provide a centralised and modern wastewater system for the communities of Stuarts Points, Fishermans Reach and Grassy Head
- improve the flood resilience of Stuarts Point and surrounds through the removal of onsite sewage management systems
- enable planned population growth and economic development across the Stuarts Point, Fishermans Reach and Grassy Head
- reduce the environmental impact to the local groundwater aquifer from pollution events associated with the underperforming onsite sewage management systems

Wastewater Collection and Transfer System

The key elements of the wastewater collection and transfer system would be the low-pressure sewer network and the property collection systems.

Low-pressure sewer network

The low-pressure sewer network would transfer wastewater generated from residential, commercial and industrial properties within the scheme area spanning Grassy Head, Stuarts Point and Fishermans Reach to the Stuarts Point WWTP via a network of low-pressure sewer main systems.

The main construction method for pipes will be trenchless underground boring using horizontal directional drilling (HDD), which requires significantly less surface disturbance compared to traditional trenching methods. This involves establishing discrete drill sites with shallow entry pits for a surface launched drill to install the pipe through the subsurface in a shallow arc and linking sections approximately every 100 metres as required for valve placements, drill exit sites and pipe joining.

Where the under boring equipment needs to be established or two sections of under bored pipe needs joining and native vegetation disturbance is unavoidable, or where under boring is not an option and trenching is required, vegetation removal with a maximum clearance corridor of five metres may be required. This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Operation of the sewer network would see the network continually transfer wastewater to the WWTP and would involve routine maintenance to address blockages and leaks.

Property collection systems

The property collection systems comprise the infrastructure required to connect the residential and commercial properties in the scheme area to the low-pressure sewer network. The final design and installation of the property connection systems would be undertaken in consultation with property owners during a property audit that would be undertaken by specialist auditors.

Stuarts Point WWTP

The WWTP would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes with disinfection.

Construction of the WWTP would involve bulk earthworks, building of the plant, installation of treatment processes, and installation of services. The WWTP would continuously operate, with up to three staff attending daily operations comprising regular monitoring and maintenance of treatment processes to maintain compliance with effluent quality criteria.

Treated Effluent Disposal System

The treated effluent disposal system comprises the treated effluent pipeline and the dunal discharge.

Treated effluent pipeline

The treated effluent pipeline would be located within Lot 1 DP1284907 (the WWTP site), the road reserve and part Lot 7300 DP115278 (the dunal discharge site) and comprise approximately 2.7 kilometres of pipework to transfer tertiary treated and disinfected effluent from the WWTP to the dunal discharge area.

The treated effluent pipeline crossing of the Macleay Arm is proposed as a trenchless crossing design involving HDD through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm. This major underbore would be undertaken via the establishment of a major underbore entry site on the corner of Kimpton Street and Marine Parade in Stuarts Point (west of the Macleay Arm) and the establishment of a major underbore exit site within the southern area of the land proposed for the dunal discharge (east of the Macleay Arm).

Operation of the treated effluent pipeline will include routine maintenance to maintain the transfer of tertiary treated and disinfected effluent from the Stuarts Point WWTP to the dunal discharge.

Dunal discharge

The dunal discharge involves the discharge of treated effluent through the dunal system on the eastern side of the Macleay Arm within part Lot 7300 DP115278 via surface irrigation. Construction of the dunal discharge would involve vegetation clearance and installation of surface irrigation pipework, ancillary infrastructure and the erection of security fencing and signage. Construction vehicles and machinery would access the dunal discharge site along the beach, from the authorised beach access at the Grassy Head Holiday Park.

Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

Aboriginal cultural heritage

The project area is within the Kempsey Local Aboriginal Land Council (LALC) boundaries. Assessments conducted in 2021 at the proposed WWTP site and dunal discharge site concluded there was no evidence of Aboriginal Cultural activity.

However, the project is close to known cultural heritage sites. A search in the Aboriginal Heritage Information Management Systems (AHIMS) indicated that six Aboriginal sites were recorded in or near the project location. The southern extent of the project in Fishermans Reach is close to the northern extent of the Clybucca Aboriginal Area. This contains the largest midden in the Southern Hemisphere and has cultural and spiritual significance to the local indigenous community.

Additionally, parts of the project are classified as archaeologically sensitive landscape as defined in the *Due Diligence Code of Practice* (Department of Environment, Climate Change and Water, 2010).

Due to the proximity of known cultural heritage sites, an ACHAR will be prepared in accordance with:

- *The Guide to Assessing Investigating and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010)

- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010).

To date, the ACHAR included a survey which was undertaken over the project area over a period of two days, to which registered Aboriginal parties (RAP) were invited to attend. This will provide a robust level of survey effort in consultation with the local community to adequately assess the project area to a level Heritage NSW require for projects of this scale.

Historic heritage

A desktop assessment of local, state, and Commonwealth databases was undertaken to identify any significant heritage items. The search indicated there were no state, Commonwealth, national or world heritage listed places within or close to the project site.

One State Heritage listed property, the South West Rocks Pilot Station Complex, was located approximately seven kilometres from the WWTP on Lot 7002 DP 1073215.

A heritage impact assessment will be undertaken to meet the following objectives:

- to identify whether historical heritage items or areas are, or are likely to be, present within the survey boundary
- to assess the significance of any recorded historical heritage items or areas
- to determine whether the project is likely to cause harm to recorded historical heritage items or areas
- provide management recommendations and options for mitigating impacts.

As part of the heritage assessment, a field assessment was undertaken by a suitably qualified archaeologist concurrently with the ACHAR field survey. A heritage impact statement will be prepared in accordance with *the Heritage Council's Historical Archaeology Code of Practice* (Heritage Council, 2006).

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

State Government Agency Consultation Record

Water NSW

RAMBOLL

ENVIRONMENT
& HEALTH

Water NSW
Level 14/169 Macquarie Street
Parramatta, NSW 2150

Attention: Alison Kniha
Email: alison.kniha@waternsw.com.au

Stuarts Point Sewerage Scheme project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

The project would consist of the installation of a low-pressure sewer network to service approximately 540 properties across Stuarts Point, Grassy Head and Fishermans Reach, and would include the individual property connection system infrastructure required to connect existing properties into the low-pressure sewer network. Treatment of the collected wastewater would be supplied by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) per day located to the south of Stuarts Point township.

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Ramboll
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Australia

T +61 2 4962 5444
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ACN 095 437 442
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As required by the SEARs, consultation with Water NSW is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

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Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

The project is in the Macleay River catchment which supports a range of water uses such as water utilities, local councils, conservation, livestock grazing, dryland agriculture and forestry and tourism. It runs adjacent to the Macleay Arm which forms part of the Macleay River estuary. The communities of Stuarts Point, Grassy Head and Fishermans Reach receive a potable water supply predominately sourced from groundwater borefields with the Steuart McIntrye Dam serving as an alternative source.

There are several groundwater monitoring bores identified within the Stuarts Point project area, with a proportion of the bores identified as Water NSW monitoring bores.

Development of the project will involve the construction and operation of a treated effluent transfer pipeline and dunal discharge area. Treated effluent will be pumped through the pipeline extending two kilometres from the WWTP to the effluent disposal area. Approximately 450 metres of the pipeline will run east to west across the Macleay Arm to the vegetated dunal effluent disposal area located at Lot 73600 (DP 1152758).

Effluent disposal will occur in the dunal area on the eastern section of the Macleay Arm. The dunal discharge area would include a surface drip irrigation system comprising a series of surface laid pipwork that would allow effluent to infiltrate the coastal sands. The effluent disposal area required for effluent

application would be approximately 6.7 hectares of land identified in the coastal dune area, which has been sized to accommodate 100% discharge.

Three-dimensional hydrodynamic modelling was undertaken on the dunal discharge in the vicinity of the Macleay Reach and River which showed nutrient and salinity loads from groundwater discharge are predicted to rapidly reduce to acceptable water quality standards in close proximity (i.e. within tens of metres) to the groundwater discharge boundary.

A detailed water assessment is being undertaken and will describe baseline groundwater quality and hydraulic conductivity, estimate water take during the project, identify required water entitlements and licences and identify water quality impacts from the project and propose mitigation and management measures. Additionally, a Dewatering Management Plan will be prepared as dewatering of groundwater is expected to be required during construction.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Alison Kniha <Alison.Kniha@waternsw.com.au>
Sent: Friday, 1 August 2025 1:54 PM
To: Charyssa Lawrence
Cc: Shaun Taylor; Brad Finney
Subject: RE: Stuarts Point Sewerage Scheme: Request for WaterNSW Input [Filed 01 Aug 2025 13:57]

Categories: Filed by Mail Manager

Hi Charyssa

Thank you for your email requesting WaterNSW's input to the preparation of the EIS for the Stuarts Point Sewerage Scheme Project.

In 2023 WaterNSW provided a response to the Department's SEARs that the groundwater monitoring sites within or close to the project site must be considered and the protection of these sites addressed, including from potential infiltration from the treatment plant. I note the letter acknowledges the bores with modelling identifying acceptable WQ standards. Further to this, please note that WaterNSW operates these bores as a service for DCCEEW, so any impacts on the aquifer itself should be addressed by them.

As such our main points remain that the project must ensure that:

- WaterNSW's assets (above and below ground) aren't damaged during construction or operation of the scheme, and
- WaterNSW is able to continue our operation of the bores (specifically the ability to access them) throughout the construction and operation phases. Our team conducts scheduled visits to these bores four time per year, plus occasional ad hoc visits for repairs or maintenance.

If information regarding the specifics of bore location, access and operation is required, please contact Brad Finney, Water Monitoring Team Leader (cc'd).

Regards,

Alison Kniha
Environmental Planning Assessments & Approvals Manager

WaterNSW
We're at the source

PO Box 398, Parramatta NSW 2124
Level 14, 169 Macquarie Street
Parramatta NSW 2150
alison.kniha@waternsw.com.au
waternsw.com.au

Follow us on socials:

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Thursday, 24 July 2025 11:22 AM
To: Alison Kniha <Alison.Kniha@waternsw.com.au>
Cc: Shaun Taylor <staylor@ramboll.com>
Subject: [EXTERNAL] Stuarts Point Sewerage Scheme: Request for WaterNSW Input

Hi Alison,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with WaterNSW is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The attached letter has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

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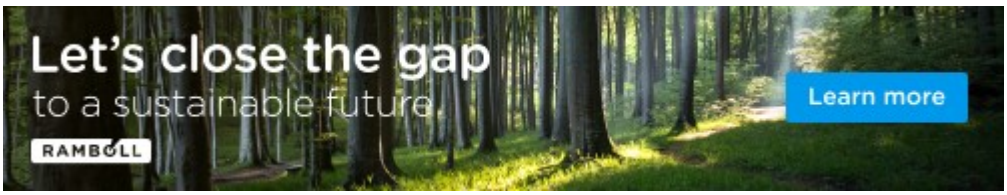
Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300

https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442



State Government Agency Consultation Record

NSW State Emergency Services

RAMBOLL

ENVIRONMENT
& HEALTH

NSW State Emergency Service
93-99 Burelli Street
Wollongong, NSW

Attention: Gillian Webber
Email: rra@ses.nsw.gov.au

Stuarts Point Sewerage Scheme project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

The project would consist of the installation of a low-pressure sewer network to service approximately 540 properties across Stuarts Point, Grassy Head and Fishermans Reach, and would include the individual property connection system infrastructure required to connect existing properties into the low-pressure sewer network. Treatment of the collected wastewater would be supplied by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) per day located to the south of Stuarts Point township.

The project would include disposal of the treated effluent in the narrow dune system between the Tasman Sea and Macleay Arm to the east of Stuarts Point. Effluent would be transferred to the effluent disposal area via an effluent transfer pipeline inclusive of 450 metres of pipework installed beneath the Macleay Arm via trenchless underground boring.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems. Additionally, the area is planned for future residential development and as such, a revised sewer strategy is required to accommodate the increasing loads.

The estimated development cost of the project is valued at over $55.5 million. The project is therefore considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* and the *State Environmental Planning Policy (Planning Systems 2021)*.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The

Ramboll
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Australia

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https://ramboll.com

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SEARs for the project were issued on 21 April 2023 (refer to **Attachment 2**) and require consultation with:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW) – Conservation Programs, Heritage & Regulation Group (DCCEEW CPHR)
- DCCEEW– Water Group (DCCEEW Water)
- Department of Primary Industries (DPI) – Fisheries (DPI – Fisheries)
- DPI – Agriculture (DPI – Agriculture)
- NSW Environment Protection Authority (NSW EPA)
- National Parks and Wildlife Services (NPWS)
- NSW Health
- Heritage NSW
- Water NSW
- Transport for NSW (TfNSW)
- Crown lands
- Fire and Rescue NSW (FRNSW)
- NSW State Emergency Service (NSW SES)
- NSW Rural Fire Service (NSW RFS).

As required by the SEARs, consultation with NSW SES is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach. These communities are currently relying on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- wastewater collection and transfer system:
  - low pressure sewer network
  - property collection systems
- Stuarts Point Wastewater Treatment Plant (WWTP)
- treated effluent disposal system:
  - treated effluent pipeline
  - dunal discharge

The objectives of the project are to:

- provide a centralised and modern wastewater system for the communities of Stuarts Points, Fishermans Reach and Grassy Head
- improve the flood resilience of Stuarts Point and surrounds through the removal of onsite sewage management systems
- enable planned population growth and economic development across the Stuarts Point, Fishermans Reach and Grassy Head
- reduce the environmental impact to the local groundwater aquifer from pollution events associated with the underperforming onsite sewage management systems

Wastewater Collection and Transfer System

The key elements of the wastewater collection and transfer system would be the low-pressure sewer network and the property collection systems.

Low-pressure sewer network

The low-pressure sewer network would transfer wastewater generated from residential, commercial and industrial properties within the scheme area spanning Grassy Head, Stuarts Point and Fishermans Reach to the Stuarts Point WWTP via a network of low-pressure sewer main systems.

The main construction method for pipes will be trenchless underground boring using horizontal directional drilling (HDD), which requires significantly less surface disturbance compared to traditional trenching methods. This involves establishing discrete drill sites with shallow entry pits for a surface launched drill to install the pipe through the subsurface in a shallow arc and linking sections approximately every 100 metres as required for valve placements, drill exit sites and pipe joining.

Where the under boring equipment needs to be established or two sections of under bored pipe needs joining and native vegetation disturbance is unavoidable, or where under boring is not an option and trenching is required, vegetation removal with a maximum clearance corridor of five metres may be required. This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Operation of the sewer network would see the network continually transfer wastewater to the WWTP and would involve routine maintenance to address blockages and leaks.

Property collection systems

The property collection systems comprise the infrastructure required to connect the residential and commercial properties in the scheme area to the low-pressure sewer network. The final design and installation of the property connection systems would be undertaken in consultation with property owners during a property audit that would be undertaken by specialist auditors.

Stuarts Point WWTP

The WWTP would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes with disinfection.

Construction of the WWTP would involve bulk earthworks, building of the plant, installation of treatment processes, and installation of services. The WWTP would continuously operate, with up to three staff attending daily operations comprising regular monitoring and maintenance of treatment processes to maintain compliance with effluent quality criteria.

Treated Effluent Disposal System

The treated effluent disposal system comprises the treated effluent pipeline and the dunal discharge.

Treated effluent pipeline

The treated effluent pipeline would be located within Lot 1 DP1284907 (the WWTP site), the road reserve and part Lot 7300 DP115278 (the dunal discharge site) and comprise approximately 2.7 kilometres of pipework to transfer tertiary treated and disinfected effluent from the WWTP to the dunal discharge area.

The treated effluent pipeline crossing of the Macleay Arm is proposed as a trenchless crossing design involving HDD through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm. This major underbore would be undertaken via the establishment of a major underbore entry site on the corner of Kimpton Street and Marine Parade in Stuarts Point (west of the Macleay Arm) and the establishment of a major underbore exit site within the southern area of the land proposed for the dunal discharge (east of the Macleay Arm).

Operation of the treated effluent pipeline will include routine maintenance to maintain the transfer of tertiary treated and disinfected effluent from the Stuarts Point WWTP to the dunal discharge.

Dunal discharge

The dunal discharge involves the discharge of treated effluent through the dunal system on the eastern side of the Macleay Arm within part Lot 7300 DP115278 via surface irrigation. Construction of the dunal discharge would involve vegetation clearance and installation of surface irrigation pipework, ancillary infrastructure and the erection of security fencing and signage. Construction vehicles and machinery would access the dunal discharge site along the beach, from the authorised beach access at the Grassy Head Holiday Park.

Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

The project is located within the Macleay River catchment which covers an area of 11,540 square kilometres. The river flows south-east from the Northern Tablelands through a coastal floodplain before meeting the Pacific Ocean at South West Rocks.

In March 2021, multiple properties in Stuarts Point were evacuated as the Local Emergency Operations Controller (LEOCON) issued an evacuation order at 9.30pm (Friday 26 March 2021), after NSW Heath confirmed a risk of faecal matter and bacteria in the discharge from onsite septic systems impacted by floodwaters. It is anticipated that the provision of a centralised sewer system will improve flood resilience and lessen the necessity evacuation procedures for the townships currently relying on onsite septic systems.

The majority of the project will be installed within the subsurface including the pressure sewer network and effluent transfer pipeline and as such, is unlikely to alter flood behaviour once operational. The location of the Stuarts Point WWTP is above Council's Flood Planning Area (1%AEP level with 500mm freeboard). The dunal discharge area site is located below Council's Flood Planning Area but sits above the 5% Annual Exceedance Probability (AEP) flood level, noting the dunal discharge area does not comprise any permanently built structures.

The EIS will identify flood risk and map the features relevant to flooding as described in the *Floodplain Development Manual 2005* and the more current *Flood Risk Management Manual* by Department of Planning and Environment and dated 2023.

Emergency flood evacuation procedures would be developed for the protection of construction personnel and for the safe management of construction machinery. These measures would be implemented to secure the construction site so that materials, machinery and equipment do not pose a safety risk to personnel, residents, buildings and infrastructure.

This assessment will be done with input from the Kempsey Shire Council. The EIS will consider a range of design flood events including the 0.5% and 0.2% Annual Exceedance Probability (AEP) flood events as proxies for assessing sensitivity to increased rainfall events due to climate change, in addition to the 1%, 2%, 5% AEP levels and the Probable Maximum Flood (PMF) level. The assessment will also include provision of emergency management procedures for the WWTP and dunal discharge with consideration of the full range of flood risks.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: NSW SES Risk Reduction <rra@ses.nsw.gov.au>
Sent: Thursday, 14 August 2025 2:20 PM
To: Shaun Taylor
Cc: NSW SES Risk Reduction; Charyssa Lawrence; Lisa Ignatavicius; Northern Zone Ops; Carolyn Storrie
Subject: Response ID 3272 RE: Stuarts Point Sewerage Scheme: Request for NSW SES Input
Attachments: 20250814 NSWSES ID3272 Response EIS Stuarts Point Sewerage Scheme.pdf

Good afternoon Shaun,

Thank you for providing NSW SES the opportunity to review the proposed Stuarts Point Sewerage Scheme.

Please find NSW SES response attached for consideration.

Kind regards.
Daniela

Daniela Mitreski
Program Support Officer | Emergency Risk Assessment Branch | Emergency Management Directorate
NSW State Emergency Service – State Headquarters
E rra@ses.nsw.gov.au

93-99 Burelli Street Wollongong, NSW 2500
PO Box 6126 Wollongong, NSW 2500
www.ses.nsw.gov.au

OUR MISSION: SAVING LIVES AND CREATING SAFER COMMUNITIES.

OUR VISION: A TRUSTED VOLUNTEER-BASED EMERGENCY SERVICE, WORKING TOGETHER TO DELIVER EXCELLENCE IN COMMUNITY PREPAREDNESS AND EMERGENCY RESPONSE.

FOR EMERGENCY HELP IN FLOODS, STORMS AND TSUNAMI CALL THE NSW SES ON 132 500

The NSW SES acknowledges the traditional custodians of the lands on which we walk, work and live. We recognise their continuing connection to land, waters and culture and pay respect to Elders, past and present.

From: NSW SES Risk Reduction <rra@ses.nsw.gov.au>
Sent: Thursday, 24 July 2025 3:28 PM
To: Charyssa Lawrence <CLAWRENCE@ramboll.com>; Shaun Taylor <staylor@ramboll.com>
Cc: NSW SES Risk Reduction <rra@ses.nsw.gov.au>
Subject: ACK ID 3272 RE: Stuarts Point Sewerage Scheme: Request for NSW SES Input

Good afternoon Shaun and Charyssa,

Thank you for the above referral which has been registered as ID 3272. Please quote this ID on any related future correspondence.

The referral will be assessed and if deemed applicable, a response will be forthcoming in due course.

Please note that staff may be involved in NSW SES Operations which could result in a delay in response times.

Kind regards.
Daniela

Daniela Mitreski
Program Support Officer | Emergency Risk Assessment Branch | Emergency Management Directorate
NSW State Emergency Service – State Headquarters
E rra@ses.nsw.gov.au

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From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Thursday, 24 July 2025 11:14 AM
To: NSW SES Risk Reduction <rra@ses.nsw.gov.au>
Cc: Shaun Taylor <staylor@ramboll.com>
Subject: Stuarts Point Sewerage Scheme: Request for NSW SES Input

Hi Gillian,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with NSW SES is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The attached letter has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

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D +61 2 9954 8174
clawrence@ramboll.com

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Newcastle, NSW 2300

https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

Our Ref: ID 3272
Your Ref:

14 August 2025

Shaun Taylor
Ramboll
The Arc, 45a Watt Street
Newcastle NSW 2300

Via email

email: staylor@ramboll.com
CC: lisa.ignatavicius1@ses.nsw.gov.au

Dear Shuan,

Environmental Impact Assessment for Stuarts Point Sewerage Scheme

Thank you for the opportunity to provide comment for the Environmental Impact Assessment (EIS) for Stuarts Point Sewerage Scheme. It is understood that the proposed wastewater treatment plant (WWTP) would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes with disinfection. Construction of the WWTP would involve bulk earthworks, building of the plant, installation of treatment processes, and installation of services. The WWTP would continuously operate, with up to three staff attending daily operations comprising regular monitoring and maintenance of treatment processes to maintain compliance with effluent quality criteria.

The NSW State Emergency Service (NSW SES) is the agency responsible for dealing with floods, storms and tsunami in NSW. This role includes, planning for, responding to and coordinating the initial recovery from floods. As such, the NSW SES has an interest in the public safety aspects of the development of flood prone land, particularly the potential for changes to land use to either exacerbate existing flood risk or create new flood risk for communities in NSW.

The NSW SES recommends that consideration of flooding issues is undertaken in accordance with the requirements of NSW Government's Flood Prone Land Policy as set out in the Flood Risk Management Manual 2023 (the Manual) and supporting guidelines, including the Support for Emergency Management Planning and relevant planning directions and circulars relating to the *Environmental Planning and Assessment Act, 1979*. Some of the issues which are of concern to the NSW SES are detailed in Attachment A.

Flood risk at the site

STATE HEADQUARTERS
93 - 99 Burelli Street, Wollongong 2500
PO Box 6126, Wollongong NSW 2500
P (02) 4251 6111
F (02) 4251 6190
www.ses.nsw.gov.au
ABN: 88 712 649 015

Stuarts Point Stuarts Point and Grassy Gully may become isolated in extreme events due to back up water from the Macleay River. Stuarts Point is classified as a High Flood Island which means that access roads are closed, and no overland or alternative road access is possible. Evacuation will have to take place before isolation occurs if it will not be possible to provide adequate support during the period of isolation, if essential services won't be available, or if houses will be flooded. We note the location of the Stuarts Point WWTP is above Council's Flood Planning Area (1%AEP level with 500mm freeboard). The dunal discharge area site is located below Council's Flood Planning Area but sits above the 5% Annual Exceedance Probability (AEP) flood level, noting the dunal discharge area does not comprise any permanently built structures.[1]

All road access is cut at around 6 metres on the Kempsey gauge, isolating the lower Macleay communities resulting in access issues including for evacuations.

We recommend that the EIS should include:

- **consideration** of the flood risks at the site, including risk to life and property during both the construction and operation phases of the development, including up to the Probable Maximum Flood (PMF) and under climate change conditions.
- **preparation** of a Flood Risk Impact Assessment addressing:
    - impact of floodwater on the infrastructure;
    - impact of the proposal (including the fill and access road changes) on flood flow and neighbouring properties;
    - impact under climate change conditions; and
    - modelling to understand duration and extent of flooding.

In addition, the NSW SES:

- **support** the proposal to improve flood resilience and lessen the necessity evacuation procedures for the townships currently relying on onsite septic systems.
- **recommend** seeking advice from the Department of Climate Change, Energy, the Environment and Water (DCCEEW) with regard to the proposed bulk earthworks and vegetation removal.
- **recommend** the development of robust, thorough, and detailed flood emergency management plans to satisfy the need for ongoing worker awareness and the importance of early evacuation when the development is being constructed and once it is complete. We understand approximately 20 full-time equivalent personnel would be required for construction.
- **highlight** the need for flood resilient site design and supporting infrastructure. Where possible, critical infrastructure should be located above the PMF, to minimise disruption to essential services and reduce risks of exposing persons onsite or downstream to polluted floodwater. [2]

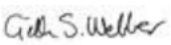
[1] Ramboll, 2025. Letter to NSW SES 23/7/2025. Stuarts Point Sewerage Scheme project Page 4
[2] Ramboll, 2025. Letter to NSW SES 23/7/2025. Stuarts Point Sewerage Scheme project Page 4

You may also find the following Guidelines available on the NSW SES website useful:

- Reducing Vulnerability of Buildings to Flood Damage

Please feel free to contact us via email at rra@ses.nsw.gov.au should you wish to discuss any of the matters raised in this correspondence. The NSW SES would also be interested in receiving future correspondence regarding the outcome of this referral via this email address.

Yours sincerely



Gillian Webber
Coordinator Emergency Risk Assessment Regional
NSW State Emergency Service

State Government Agency Consultation Record

Fire and Rescue NSW

RAMBOLL

ENVIRONMENT
& HEALTH

Fire and Rescue NSW
1 Amarina Avenue
Greenacre, NSW 2190

Attention: James O'Carroll
Email: firesafety@fire.nsw.gov.au

Stuarts Point Sewerage Scheme project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

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The project would include disposal of the treated effluent in the narrow dune system between the Tasman Sea and Macleay Arm to the east of Stuarts Point. Effluent would be transferred to the effluent disposal area via an effluent transfer pipeline inclusive of 450 metres of pipework installed beneath the Macleay Arm via trenchless underground boring.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems. Additionally, the area is planned for future residential development and as such, a revised sewer strategy is required to accommodate the increasing loads.

The estimated development cost of the project is valued at over $55.5 million. The project is therefore considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* and the *State Environmental Planning Policy (Planning Systems 2021)*.

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As required by the SEARs, consultation with FRNSW is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

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- wastewater collection and transfer system:
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  - treated effluent pipeline
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The objectives of the project are to:

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- improve the flood resilience of Stuarts Point and surrounds through the removal of onsite sewage management systems
- enable planned population growth and economic development across the Stuarts Point, Fishermans Reach and Grassy Head
- reduce the environmental impact to the local groundwater aquifer from pollution events associated with the underperforming onsite sewage management systems

Wastewater Collection and Transfer System

The key elements of the wastewater collection and transfer system would be the low-pressure sewer network and the property collection systems.

Low-pressure sewer network

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The main construction method for pipes will be trenchless underground boring using horizontal directional drilling (HDD), which requires significantly less surface disturbance compared to traditional trenching methods. This involves establishing discrete drill sites with shallow entry pits for a surface launched drill to install the pipe through the subsurface in a shallow arc and linking sections approximately every 100 metres as required for valve placements, drill exit sites and pipe joining.

Where the under boring equipment needs to be established or two sections of under bored pipe needs joining and native vegetation disturbance is unavoidable, or where under boring is not an option and trenching is required, vegetation removal with a maximum clearance corridor of five metres may be required. This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Operation of the sewer network would see the network continually transfer wastewater to the WWTP and would involve routine maintenance to address blockages and leaks.

Property collection systems

The property collection systems comprise the infrastructure required to connect the residential and commercial properties in the scheme area to the low-pressure sewer network. The final design and installation of the property connection systems would be undertaken in consultation with property owners during a property audit that would be undertaken by specialist auditors.

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The WWTP would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes with disinfection.

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Treated effluent pipeline

The treated effluent pipeline would be located within Lot 1 DP1284907 (the WWTP site), the road reserve and part Lot 7300 DP115278 (the dunal discharge site) and comprise approximately 2.7 kilometres of pipework to transfer tertiary treated and disinfected effluent from the WWTP to the dunal discharge area.

The treated effluent pipeline crossing of the Macleay Arm is proposed as a trenchless crossing design involving HDD through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm. This major underbore would be undertaken via the establishment of a major underbore entry site on the corner of Kimpton Street and Marine Parade in Stuarts Point (west of the Macleay Arm) and the establishment of a major underbore exit site within the southern area of the land proposed for the dunal discharge (east of the Macleay Arm).

Operation of the treated effluent pipeline will include routine maintenance to maintain the transfer of tertiary treated and disinfected effluent from the Stuarts Point WWTP to the dunal discharge.

Dunal discharge

The dunal discharge involves the discharge of treated effluent through the dunal system on the eastern side of the Macleay Arm within part Lot 7300 DP115278 via surface irrigation. Construction of the dunal discharge would involve vegetation clearance and installation of surface irrigation pipework, ancillary infrastructure and the erection of security fencing and signage. Construction vehicles and machinery would access the dunal discharge site along the beach, from the authorised beach access at the Grassy Head Holiday Park.

Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

Bushfire prone land mapping was completed to identify areas of the project that are at an increased risk for fire. The results showed most of the project is within bushfire prone land under the provisions of the NSW Rural Fire Service (RFS). Lot 1 (DP 1284907) and part Lot 7300 (DP 1152758) contains vegetation that is categorised as a bushfire risk and identified as vegetation category 1, 2, and 3. The following parts of the project are mapped as bushfire prone land (vegetation) and as associated buffer:

- WWTP – vegetation category 3
- Low-pressure sewer network – vegetation category 1,2,3 and buffer
- Dunal discharge site – vegetation category 1

The mapping of bushfire prone land relative to the project is provided in **Attachment 1**.

The development of the project will be designed in accordance with the NSW RFS P*lanning for Bushfire Protection 2019* and the relevant provisions in the *Australian Standard AS3959-2009 Construction of buildings on bushfire prone land*.

A bushfire assessment is being undertaken and will consider environmental factors that increase the risk for fire (e.g. fuel quantity, type, topography and weather patterns). It will also consider specific activities (e.g. hot works and construction activities) and infrastructure components that my increase combustion or ignition risks (e.g. electrical components). The assessment will also determine a Bushfire

Attack Level and Asset Protection Zone requirements for the WWTP design. The objective of this assessment is to demonstrate the project will be designed, constructed and operated with minimal ignition risks.

The level of assessment will be determined using the criteria and guidance provided in the *State Environmental Planning Policy (Resilience and Hazards) 2021*, which will also inform if a Preliminary Hazard Analysis (PAH) is also required.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

Charyssa Lawrence

From: Operational Liaison <OpsLiaison@fire.nsw.gov.au>
Sent: Wednesday, 30 July 2025 10:15 AM
To: Charyssa Lawrence
Cc: Fire Safety
Subject: RE: Stuarts Point Sewerage Scheme: Request for Fire and Rescue NSW Input

Good morning,

Thank you for your email.

FRNSW will not comment on this project at this time, however, will provide advice through the Dept. of Planning or other consent authority as the project progresses.

FRNSW and DPHI have established processes for review and recommendations for state significant development with the DPHI, and with consent authorities for designated development. It would be FRNSW expectation that regular applicable processes (FEBQ and FER), codes and standards (NCC) and legislative instruments will be followed for this proposal and FRNSW will engage with the consent authority through those established processes.

Kind regards

STATION OFFICER RICHARD JAY
A/Team Leader
Fire Safety Liaison Unit | Fire and Rescue NSW
M: 0407 103 571 **E:** richard.jay@fire.nsw.gov.au
1 Amarina Avenue Greenacre NSW 2190

From: Charyssa Lawrence <CLAWRENCE@ramboll.com>
Sent: Thursday, 24 July 2025 10:55 AM
To: Fire Safety <FireSafety@fire.nsw.gov.au>

Cc: Shaun Taylor <staylor@ramboll.com>
Subject: Stuarts Point Sewerage Scheme: Request for Fire and Rescue NSW Input

Hi James,

Ramboll have been engaged by Kempsey Shire Council to assist with the development proposal for the Stuarts Point Sewerage Scheme Project. The proposed project will consist of the installation of a pressure sewerage network for approximately 540 properties across Stuarts Point, Grassy Head and Fisherman's Reach. Proposed treatment is by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) located to the south of the Stuarts Point township.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. As required by the SEARs, consultation with Fire and Rescue NSW is required for the EIS. Ramboll are currently progressing the EIS stage of the proposal. The attached letter has been prepared as an offer for inputs into the EIS, or discussion on certain matters if required and includes further details of the proposed project. It is requested that you please provide feedback by **14 August 2023**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Kind regards
Charyssa Lawrence

B Sc (Earth Science) (Hons)
Environmental Scientist
Impact Assessment

D +61 2 9954 8174
clawrence@ramboll.com

_____

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300

https://www.ramboll.com/

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

State Government Agency Consultation Record

NSW Rural Fire Services

RAMBOLL

ENVIRONMENT
& HEALTH

NSW Rural Fire Service
Locked Bag 17
Granville, NSW 2142

Attention: NSW Rural Fire Service representative
pes@rfs.nsw.gov.au

Stuarts Point Sewerage Scheme project

Date 23/07/2025

Introduction

Kempsey Shire Council (Council) is proposing to construct and operate the Stuarts Point Sewerage Scheme (the project), located in Stuarts Point, Grassy Head and Fishermans Reach, New South Wales (NSW). A figure of the proposed project location and layout is provided with this letter (refer to **Attachment 1**).

Ramboll
The Arc, 45a Watt St
Newcastle, NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

The project would consist of the installation of a low-pressure sewer network to service approximately 540 properties across Stuarts Point, Grassy Head and Fishermans Reach, and would include the individual property connection system infrastructure required to connect existing properties into the low-pressure sewer network. Treatment of the collected wastewater would be supplied by a new wastewater treatment plant (WWTP) with a proposed design capacity of approximately 5,300 Equivalent Persons (EP) per day located to the south of Stuarts Point township.

The project would include disposal of the treated effluent in the narrow dune system between the Tasman Sea and Macleay Arm to the east of Stuarts Point. Effluent would be transferred to the effluent disposal area via an effluent transfer pipeline inclusive of 450 metres of pipework installed beneath the Macleay Arm via trenchless underground boring.

The properties across Stuarts Point, Grassy Head and Fisherman's Reach are currently serviced by underperforming onsite sewerage management systems. Additionally, the area is planned for future residential development and as such, a revised sewer strategy is required to accommodate the increasing loads.

The estimated development cost of the project is valued at over $55.5 million. The project is therefore considered state significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* and the *State Environmental Planning Policy (Planning Systems 2021)*.

A Scoping Report and request for the Planning Secretary's Environmental Assessment Requirements (SEARs) was submitted on 28 March 2023. The

Ramboll Australia Pty Ltd.
ACN 095 437 442
ABN 49 095 437 442

SEARs for the project were issued on 21 April 2023 (refer to **Attachment 2**) and require consultation with:

- Department of Climate Change, Energy, the Environment and Water (DCCEEW) – Conservation Programs, Heritage & Regulation Group (DCCEEW CPHR)
- DCCEEW– Water Group (DCCEEW Water)
- Department of Primary Industries (DPI) – Fisheries (DPI – Fisheries)
- DPI – Agriculture (DPI – Agriculture)
- NSW Environment Protection Authority (NSW EPA)
- National Parks and Wildlife Services (NPWS)
- NSW Health
- Heritage NSW
- Water NSW
- Transport for NSW (TfNSW)
- Crown lands
- Fire and Rescue NSW (FRNSW)
- NSW State Emergency Service (NSW SES)
- NSW Rural Fire Service (NSW RFS).

As required by the SEARs, consultation with NSW RFS is required for the EIS. This letter has been prepared as an offer for further inputs into the EIS, or discussion on certain matters if required.

Project description

The Stuarts Point Sewerage Scheme (SPSS or the project) would provide a modern wastewater management system to the suburbs of Grassy Head, Stuarts Point and Fishermans Reach. These communities are currently relying on underperforming individual onsite sewage management systems. The project includes the construction and operation of the following key infrastructure:

- wastewater collection and transfer system:
  - low pressure sewer network
  - property collection systems
- Stuarts Point Wastewater Treatment Plant (WWTP)
- treated effluent disposal system:
  - treated effluent pipeline
  - dunal discharge

The objectives of the project are to:

- provide a centralised and modern wastewater system for the communities of Stuarts Points, Fishermans Reach and Grassy Head
- improve the flood resilience of Stuarts Point and surrounds through the removal of onsite sewage management systems
- enable planned population growth and economic development across the Stuarts Point, Fishermans Reach and Grassy Head
- reduce the environmental impact to the local groundwater aquifer from pollution events associated with the underperforming onsite sewage management systems

Wastewater Collection and Transfer System

The key elements of the wastewater collection and transfer system would be the low-pressure sewer network and the property collection systems.

Low-pressure sewer network

The low-pressure sewer network would transfer wastewater generated from residential, commercial and industrial properties within the scheme area spanning Grassy Head, Stuarts Point and Fishermans Reach to the Stuarts Point WWTP via a network of low-pressure sewer main systems.

The main construction method for pipes will be trenchless underground boring using horizontal directional drilling (HDD), which requires significantly less surface disturbance compared to traditional trenching methods. This involves establishing discrete drill sites with shallow entry pits for a surface launched drill to install the pipe through the subsurface in a shallow arc and linking sections approximately every 100 metres as required for valve placements, drill exit sites and pipe joining.

Where the under boring equipment needs to be established or two sections of under bored pipe needs joining and native vegetation disturbance is unavoidable, or where under boring is not an option and trenching is required, vegetation removal with a maximum clearance corridor of five metres may be required. This disturbance corridor would be narrowed in some areas to minimise impacts to any identified biodiversity, heritage or other environmental values and to remain within public land.

Operation of the sewer network would see the network continually transfer wastewater to the WWTP and would involve routine maintenance to address blockages and leaks.

Property collection systems

The property collection systems comprise the infrastructure required to connect the residential and commercial properties in the scheme area to the low-pressure sewer network. The final design and installation of the property connection systems would be undertaken in consultation with property owners during a property audit that would be undertaken by specialist auditors.

Stuarts Point WWTP

The WWTP would be located south of the township of Stuarts Point at Lot 1 DP 1284907. The proposed treatment level would be tertiary treatment and disinfection achieved via intermittently decanted extended aeration (IDEA) treatment processes with disinfection.

Construction of the WWTP would involve bulk earthworks, building of the plant, installation of treatment processes, and installation of services. The WWTP would continuously operate, with up to three staff attending daily operations comprising regular monitoring and maintenance of treatment processes to maintain compliance with effluent quality criteria.

Treated Effluent Disposal System

The treated effluent disposal system comprises the treated effluent pipeline and the dunal discharge.

Treated effluent pipeline

The treated effluent pipeline would be located within Lot 1 DP1284907 (the WWTP site), the road reserve and part Lot 7300 DP115278 (the dunal discharge site) and comprise approximately 2.7 kilometres of pipework to transfer tertiary treated and disinfected effluent from the WWTP to the dunal discharge area.

The treated effluent pipeline crossing of the Macleay Arm is proposed as a trenchless crossing design involving HDD through the dense sand layer sitting above the estimated depth of rock beneath the Macleay Arm. This major underbore would be undertaken via the establishment of a major underbore entry site on the corner of Kimpton Street and Marine Parade in Stuarts Point (west of the Macleay Arm) and the establishment of a major underbore exit site within the southern area of the land proposed for the dunal discharge (east of the Macleay Arm).

Operation of the treated effluent pipeline will include routine maintenance to maintain the transfer of tertiary treated and disinfected effluent from the Stuarts Point WWTP to the dunal discharge.

Dunal discharge

The dunal discharge involves the discharge of treated effluent through the dunal system on the eastern side of the Macleay Arm within part Lot 7300 DP115278 via surface irrigation. Construction of the dunal discharge would involve vegetation clearance and installation of surface irrigation pipework, ancillary infrastructure and the erection of security fencing and signage. Construction vehicles and machinery would access the dunal discharge site along the beach, from the authorised beach access at the Grassy Head Holiday Park.

Operation of the dunal discharge would involve routine maintenance to maintain the integrity and security of the discharge site and vegetation/weed management. Adverse weather events would be managed through operational protocols, including the storage of effluent at the Stuarts Point WWTP, development of triggers for the ceasing of discharges and inspections required prior to recommencing discharge to the dunal discharge area.

Construction overview

Construction of the project would involve trenchless construction methods using directional boring equipment for the length of the collection scheme and underneath the Macleay Arm and installation of pipe. Removal of vegetation would occur along the sewerage collection route as well as at both the entry and exit points of the effluent transfer and disposal area. The WWTP would also involve bulk earthworks and vegetation removal. Dewatering would take place for the project where required.

Construction of the project is anticipated to commence in 2026 (subject to regulatory approval and time required to complete detailed design of the project) and would be undertaken over a period of approximately 24 months. Approximately 20 full-time equivalent personnel would be required for construction.

Key issues for your consideration

Bushfire prone land mapping was completed to identify areas of the project that are at an increased risk for fire. The results showed most of the project is within bushfire prone land under the provisions of the NSW Rural Fire Service (RFS). Lot 1 (DP 1284907) and part Lot 7300 (DP 1152758) contains vegetation that is categorised as a bushfire risk and identified as vegetation category 1, 2, and 3. The following parts of the project are mapped as bushfire prone land (vegetation) and as associated buffer:

- WWTP – vegetation category 3
- Low-pressure sewer network – vegetation category 1,2,3 and buffer
- Dunal discharge site – vegetation category 1

The mapping of bushfire prone land relative to the project is provided in **Attachment 1**.

The development of the project will be designed in accordance with the NSW RFS P*lanning for Bushfire Protection 2019* and the relevant provisions in the *Australian Standard AS3959-2009 Construction of buildings on bushfire prone land*.

A bushfire assessment is being undertaken and will consider environmental factors that increase the risk for fire (e.g. fuel quantity, type, topography and weather patterns). It will also consider specific activities (e.g. hot works and construction activities) and infrastructure components that my increase combustion or ignition risks (e.g. electrical components). The assessment will also determine a Bushfire

Attack Level and Asset Protection Zone requirements for the WWTP design. The objective of this assessment is to demonstrate the project will be designed, constructed and operated with minimal ignition risks.

The level of assessment will be determined using the criteria and guidance provided in the *State Environmental Planning Policy (Resilience and Hazards) 2021*, which will also inform if a Preliminary Hazard Analysis (PAH) is also required.

Invitation to comment and conclusion

Ramboll invites you to provide comment on the project, including any controls or mitigation measures that should be considered in the EIS. It is requested that you please provide feedback by **14 August 2025**.

Should you wish to further discuss or provide comment please do not hesitate to contact Shaun Taylor on 0408 386 663 or email staylor@ramboll.com.

Yours sincerely

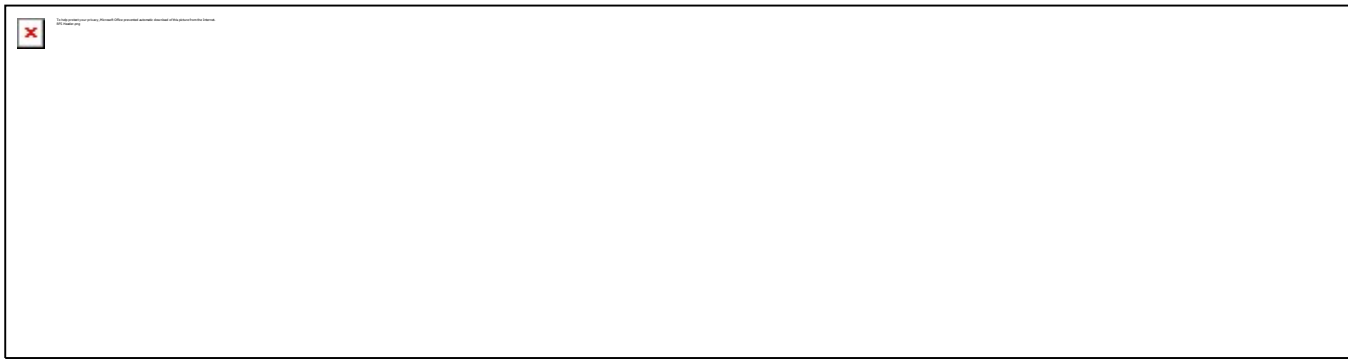
Shaun Taylor
Senior Managing Consultant
Newcastle Impact Assessment

M +61 408 386 663
staylor@ramboll.com

Attachments:

1. Figure of the proposed project location and layout
2. SEARs

From: RFS-do-not-reply <RFS-do-not-reply@id.ngcomms.net>
Sent: Monday, August 11, 2025 8:27:43 AM
To: Shaun Taylor <staylor@ramboll.com>
Subject: NSW RFS Determination: Stuarts Point Sewerage Scheme STUARTS POINT, GRASSY HEAD & FISHERMANS REACH



Attention: Shaun Taylor

Application Details: State Significant Development – Pre-EIS Consultation – Pre-EIS Consultation

Site: *Stuarts Point Sewerage Scheme*
STUARTS POINT, GRASSY HEAD & FISHERMANS REACH

Please find attached correspondence relating to the above development.

Should you wish to discuss this matter please contact Alan Bawden on 1300 NSW RFS and quote DA20230412001502-Pre-EIS Consultation-1.

Planning and Environment Services

NSW RURAL FIRE SERVICE
Locked Bag 17 Granville NSW 2142

P 1300 NSW RFS **E** records@rfs.nsw.gov.au

www.rfs.nsw.gov.au | www.facebook.com/nswrfs | www.twitter.com/nswrfs

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RFS

NSW GOVERNMENT

Shaun Taylor
The Arc, 45a Watt St
Newcastle, NSW 2300

Our reference: DA20230412001502-Pre-EIS Consultation-1

ATTENTION: Shaun Taylor

Date: Monday 11 August 2025

Dear Sir/Madam,

Development Application
State Significant Development – Pre-EIS Consultation – Waste or resource management facility
Stuarts Point Sewerage Scheme STUARTS POINT, GRASSY HEAD & FISHERMANS REACH, (none)

I refer to your correspondence regarding the above proposal which was received by the NSW Rural Fire Service on 24/07/2025.

Council proposes to install a low-pressure sewerage collection system to approximately 1500 properties across Stuarts Point, Grassy Head and Fishermans Reach with treatment at a new 5300 Equivalent Persons Stuarts Point wastewater treatment plant to be located to the south of Stuarts Point township. The project will include disposal of the treated effluent in the narrow dune system between the Pacific Ocean and Macleay Arm to the east of Stuarts Point. The sewerage collection system and WWTP is collectively called the Stuarts Points Sewerage Scheme.

The works are proposed within urban and adjoining forested lands.

The NSW RFS previously provided the following comment on the SEARs request:

".....a bush fire assessment report shall be prepared which identifies the extent to which the proposed development conforms with or deviates from the relevant provisions of Planning for Bush Fire Protection 2019."

The NSW RFS advises that the EIS shall identify bushfire risk and recommend mitigation measures, for both the construction and operation phases of the development.

For any queries regarding this correspondence, please contact Alan Bawden on 1300 NSW RFS.

Yours sincerely,

Anna Jones
Manager Planning & Environment Srv (Nth)
Built & Natural Environment

Postal address

NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

Street address

NSW Rural Fire Service
4 Murray Rose Ave
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555
F (02) 8741 5550
www.rfs.nsw.gov.au