

## TECHNICAL NOTE

**Project:** 22-23 St Georges Terrace, Herne Bay, Canterbury  
**Job No:** 4092 / P01 Final  
**Purpose of Note:** NUTRIENT ASSESSMENT  
**Date:** 02/12/2020

This technical note provides a nutrient assessment for the proposed development at 22-23 St Georges Terrace, Herne Bay, Canterbury as required by Natural England advice to Local Planning Authorities of July 2020 and modified in November 2020. The proposal is to re-develop a former 22 bed care home with 14 apartments.

### The Issue

Natural England advise that the water environment in the Stodmarsh designated sites is internationally important for its wildlife and is protected under the Water Environment Regulations and the Conservation of Habitats and Species Regulations.

Water quality assessment of the Stodmarsh designated sites reveals that levels of nutrients (nitrate and phosphate) are high and leading to the eutrophication of the sites – i.e. an excessive richness of nutrients in the water bodies which is causing plant growth to threaten protected species and habitats.

The main contributors to nutrient load into the water is from human waste treatment in the form of Waste Water Treatment Works (WWTW) discharges and agricultural runoff. WWTW discharges are being investigated by the Environment Agency and a report is due in 2022 into the impact on the Stodmarsh designated sites. That report is expected to also propose 'appropriate, possible and cost-effective solutions to any identified impacts'; so the actual impact is not fully confirmed as yet. Further, some WWTWs are being improved to reduce the nutrient load going into the waters but there is concern that the standards they are being improved to are not sufficiently low enough to reduce nutrient loads going in the waters. Again, there is uncertainty here too.

However, to address the uncertainty and subsequent risk, Natural England are advising Planning Authorities to take a 'precautionary approach' i.e. to Refuse Planning Consent for any development that is not 'nutrient neutral' until 'any solutions are implemented to remove the adverse effects on Stodmarsh'.

Therefore, a nutrient assessment is required for any development that discharges waste and/or surface water into the River Stour catchment area.

### The Development – Nutrient Assessment

#### Existing Site

The Natural England advice note includes, within Appendix 1, confirmation of the Spatial Extent covered by the advice. Within that it can be seen that certain sub-catchments of the River Stour are wholly or partially excluded from the Stodmarsh advice. The development site is situated within the 'Oyster Coach Brooks' sub-catchment. This catchment is partially excluded from the requirement for nutrient assessment. Correspondence with Southern Water Services confirms that the site effluent discharges to the May Street Wastewater Treatment Works (WWTW) which sits outside of the sub-catchment but has three outfalls – one to the River Stour and the other two to the Hogwell Sewer. The email from SWS confirming this is appended to this note.

Looking now at the specifics of the existing site we can see that the site is has recently been used as a 22 – 25 bed care home. Southern Water Services have confirmed that foul sewers in the site area discharge to the May Street WWTW. The Surface Water discharges to the front of the property where it outfalls to the sea via a local watercourse as confirmed in Environment Agency mapping.

Proposed Development

The property on the site is to be demolished and a new apartment building created. The overall impermeable areas of the site remain unchanged but the building footprint is smaller than the existing. The FW outfalls will be reused and as such there is no change to the outfall point from the site i.e. it continues to discharge to the May Street WWTW which has three outfalls as follows.

As requested please see discharge points table below;

Table S3.2 Discharge points			
Effluent Name	Discharge Point	Discharge point NGR	Receiving water/Environment
A1 and A2: Final effluent	Outlet 1	TR 21170 67521	Hogwell Sewer
A2: Final effluent	Outlet 2	TR 23760 63190	River Great Stour
A3: Settled storm sewage	Outlet 3	TR 21110 67520	Hogwell Sewer

Figure 1 – NGR Coordinates of the three outfalls from May Street WWTW

In Figure 2 below we see that the discharge from the Hogwell Sewer meets the main flow of the River Stour from the Stodmarsh Designated Site (as shown in outline by the simple red line) significantly downstream of the Stodmarsh Sites.

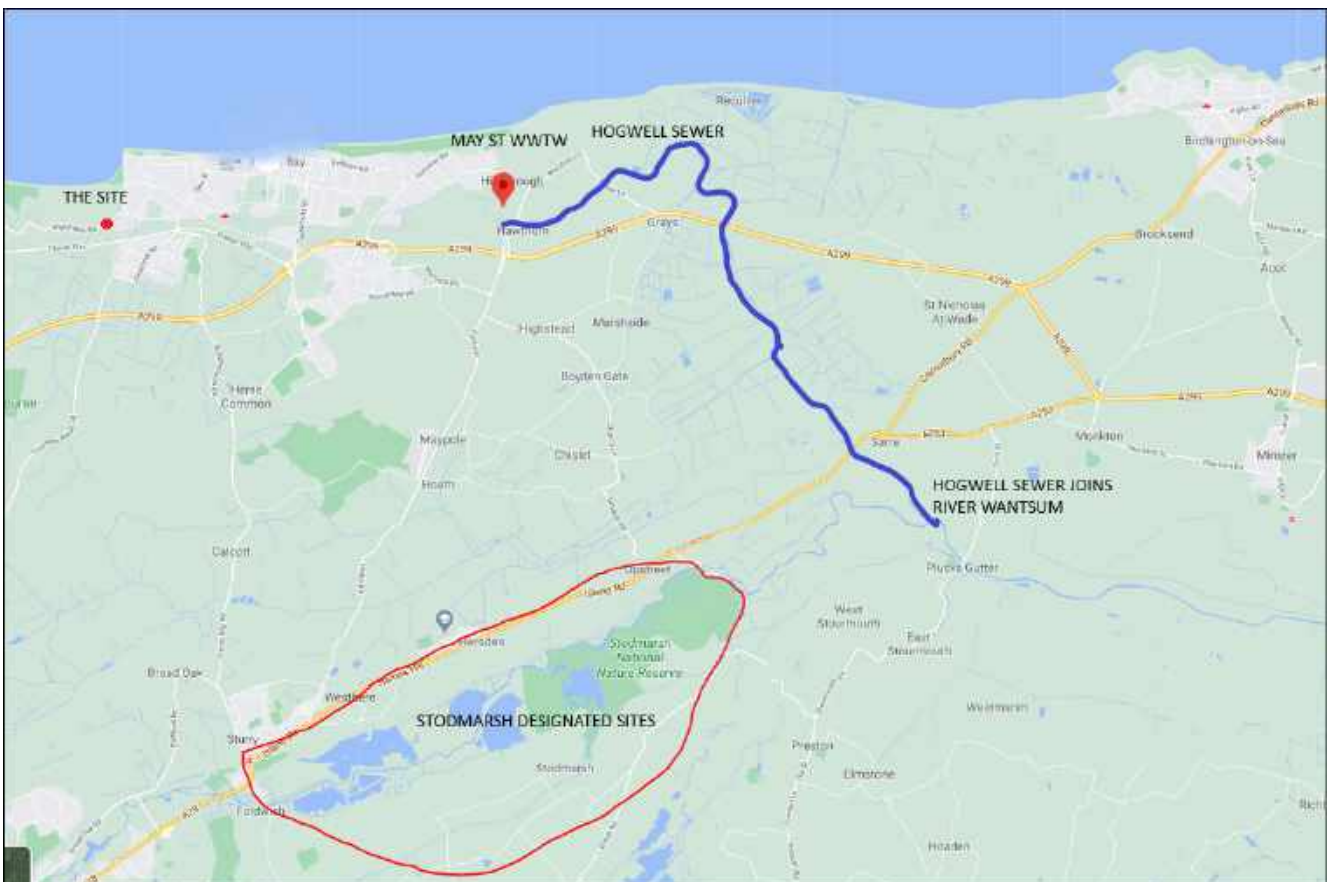


Figure 2 – shows line of Hogwell Sewer flowing towards the River Wantsum which in turn goes to The Stour

The third outfall taking some 2/3rds of the effluent goes directly to the River Stour but from the coordinates we can see it also meets the Stour to the East of the Stodmarsh Designated Sites and so the effluent will not affect water quality therein. The figure below shows the outfall plotted on a map showing the Stodmarsh Sites.

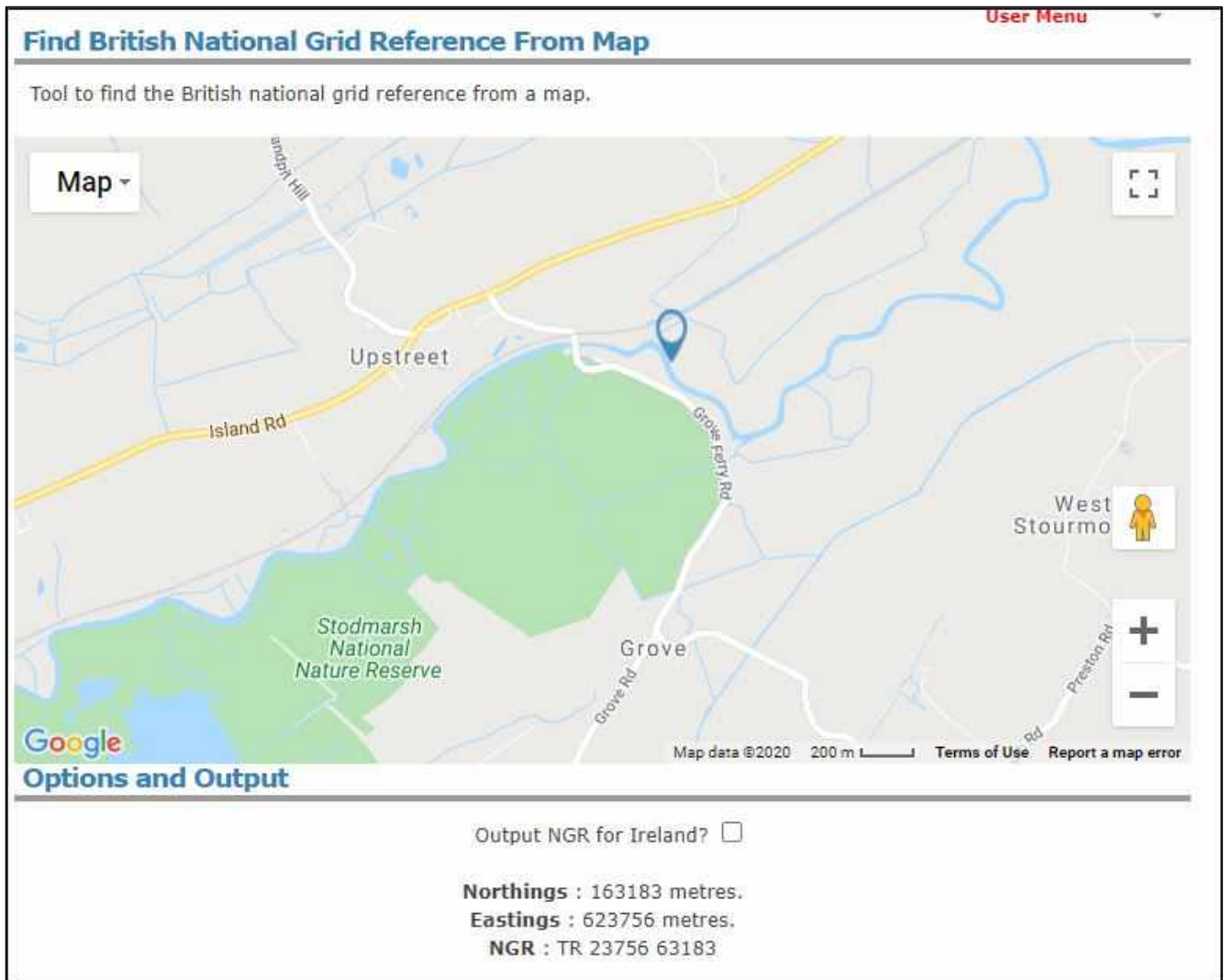


Figure 3 – shows position of the Rover Stour outfall from May Street WWTW to the East of Stodmarsh

It is therefore confirmed that the effluent from the site will continue to discharge to May Street WWTW which in turn discharges treated effluent to the east of i.e. significantly downstream of the Stodmarsh Sites. Therefore, it is reasonable to assume that any nutrient load from the development site will not adversely impact the Stodmarsh designated site.

This is of course why the Oyster Coast Brooks sub catchment is partially excluded from the Natural England advice as clearly there is no impact from the areas of the catchment that discharge to the May Street WWTW whilst the majority of the land within the catchment drains to the sea to the north, well away from the Stour catchment.

## **Conclusion**

This assessment shows that whilst the site sits within the River Stour Catchment and thus requires a Nutrient Assessment to be carried out, it also sits within the Oyster Coast Brooks sub catchment area that is excluded from the Natural England advice as confirmed at Appendix 1 of the Natural England advice document.

The FW outfall from the site goes to the May Street WWTW which sits outside of the Oyster Coast Brooks sub catchment area. It in turn discharges to the Hogwell Sewer and the River Stour – both locations do not flow into the Stodmarsh Designated Sites and so there is no nutrient impact from the development site on the Stodmarsh Designated Sites from the FW effluent.

The surface water from the site will continue to discharge northwards to the sea. It does not affect the Stour catchment and therefore does not have an impact on the Stodmarsh Designated Sites.

It is the opinion of this report that allowing the development to go forward on the basis described would not be in contravention of the advice from Natural England as the effluent and nutrients deriving from the site will not reach the Stodmarsh Designated Sites. As such there is no reason in nutrient load terms why the development cannot be granted planning consent in the form proposed.

**Prepared By:** Roland Cooper BEng, CEng, MICE, IMaPS

**Checked By:** Jack Moss MEng (Hons) CEng MICE

**Approved By:** Roland Cooper BEng, CEng, MICE, IMaPS

## Appendix 1 – Site Development Proposals

## Appendix 2 – Correspondence from Southern Water Services

## Roland Cooper

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**From:** southernwaterplanning <SouthernWaterPlanning@southernwater.co.uk>  
**Sent:** 01 December 2020 09:34  
**To:** 'roland@considine.co.uk'  
**Subject:** FW: WWTW Inquiry - May Street WWTW

**Flag Status:** Flagged

Good morning Roland,

As requested please see discharge points table below;

Table S3.2 Discharge points			
Effluent Name	Discharge Point	Discharge point NGR	Receiving water/Environment
A1 and A2: Final effluent	Outlet 1	TR 21170 67521	Hogwell
A2: Final effluent	Outlet 2	TR 23760 63190	River Great Ouse
A3: Settled storm sewage	Outlet 3	TR 21110 67520	Hogwell

Kind regards,

Vanessa Blackwell  
**Planning Coordinator for Kent, Developer Services**

**T. 03303030119**  
**M.**  
southernwater.co.uk



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**From:** Roland Cooper [<mailto:roland@considine.co.uk>]  
**Sent:** 25 November 2020 10:56  
**To:** southernwaterplanning  
**Subject:** RE: WWTW Inquiry - May Street WWTW

Hi Vanessa – thank you for your reply and yes I have read the various information items you have sent previously for which I thank you.

The reason for the specific inquiry about the outfall location of the Stour outfall from May Street WWTW is that the location of the outfall is crucial in terms of determining impact on the Stodmarsh Designated Sites. It is not a question of the permit limits. I explain further – the Hogwell Sewer, which you have already advised, receives about 1/3<sup>rd</sup> of the effluent from May Street but according to EA mapping does not flow through the Stodmarsh sites and so has no impact on nutrient levels therein. Examination of the topography in the area suggests that the outfall from May Street WWTW would logically outfall into the Stour downstream of the Stodmarsh designated sites – which if

this is the case means that the effluent from May Street does not contribute to nutrient levels therein. As you can see, knowing where the outfall is located is crucial to understanding the impact of May Street WWTW on the designated sites.

I hope this clears up the reason why we need to know this information but as always please do not hesitate to contact me directly if you wish to discuss this further.

Regards

**Roland Cooper**  
**Director**  
**B.Eng, C.Eng, MICE, IMAPS**

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**t: 01622 919918**  
**mob: 07711 249229**  
[www.considine.co.uk](http://www.considine.co.uk)

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**From:** southernwaterplanning <[SouthernWaterPlanning@southernwater.co.uk](mailto:SouthernWaterPlanning@southernwater.co.uk)>  
**Sent:** 24 November 2020 15:53  
**To:** 'roland@considine.co.uk' <[roland@considine.co.uk](mailto:roland@considine.co.uk)>  
**Subject:** RE: WWTW Inquiry 2018 - TN26 1LF

Good afternoon Roland,

Firstly, I would advise that our intention as the Planning Team is to keep an eye on the amount of properties being built and inform our System and Asset Management team when these numbers would impact our treatment works.

I am hoping you have read the guidance from Natural England, together with our FAQ's, which should assist with your enquiry as at present we do not have a specific party to discuss this within the business as our permits are regulated by the Environment Agency and we will endeavour to meet these at all times being the Regulated Body. In the FAQ's there is a table which shows the permits we are currently operating under and the sites where we will update our permits according to the latest WINEP study for the EA. This table will not be updated until the next WINEP study when we will update the business plan for next AMP (2025-2030). I am not entirely sure why the outfall



location is crucial to your enquiry after reading the Natural England guidance, however, if you could enlighten me I can add this to our FAQ's. For your information, we will not be going above and beyond the permit values that are specified by the EA.

Kind regards,

Vanessa Blackwell  
**Planning Coordinator for Kent, Developer Services**

T. 03303030119  
M.  
southernwater.co.uk



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**From:** Roland Cooper [<mailto:roland@considine.co.uk>]  
**Sent:** 18 November 2020 10:46  
**To:** southernwaterplanning  
**Subject:** RE: WWTW Inquiry 2018 - TN26 1LF

Hello Vanessa – thank you for your help with this. It is interesting to see that the site has two outfalls – how does the connection to the Stour work as that seems to be several kilometres away? Can you advise on the location of the outfall specifically? As you can imagine that is quite crucial in terms of impact on the Stodmarsh Designated sites?

In other news I have been asked by the Kent and Medway Economic Partnership (KMEP) to act as liaison with all authorities impacted by the Nutrient Advice from NE. My intention is to gather information from all parties in an effort to help with a coordinated regional strategy including making a case to Government for funding to accelerate any required works. Do you know if your organisation has a lead person for this issue so that I could make contact please?

Many thanks again for your help and speedy replies – it is appreciated.

Regards

**Roland Cooper**  
**Director**  
**B.Eng, C.Eng, MICE, IMaPS**

**Considine Limited, 25 Hollingworth Court, Turkey Mill, Ashford Road, Maidstone, Kent ME14 5PP**  
**t: 01622 919918**  
**mob: 07711 249229**  
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**From:** southernwaterplanning <[SouthernWaterPlanning@southernwater.co.uk](mailto:SouthernWaterPlanning@southernwater.co.uk)>  
**Sent:** 17 November 2020 14:57  
**To:** 'roland@considine.co.uk' <[roland@considine.co.uk](mailto:roland@considine.co.uk)>  
**Subject:** FW: WWTW Inquiry 2018 - TN26 1LF

Good afternoon Roland,

In view of your comments regarding Herne Bay, the treated final effluent has two discharge points, one to the Hogwell Sewer and the other to River Stour with each discharge point having its own permit. The treated flow complies with the tighter of the two discharge permits and splits to the two discharge points according to the DWF permit requirements.

Discharges from site as follows:

Dry Weather Flow to Outlet 1 is (as below) 2867m<sup>3</sup>/day Hogwell Sewer  
DWF to Outlet 2 is (as below) 5903m<sup>3</sup>/day River Great Stour  
(So an approximate ration of 3:6)

With regard to your comments concerning the site of the new and decommissioned WWTWs it has been necessary for me to seek advice from our Plan Manager and once I am in receipt of a response from him I will be back in contact.

Vanessa Blackwell  
**Planning Coordinator for Kent, Developer Services**  
T. 03303030119  
M.  
southernwater.co.uk



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**From:** Roland Cooper [<mailto:roland@considine.co.uk>]  
**Sent:** 16 November 2020 09:40  
**To:** southernwaterplanning <[SouthernWaterPlanning@southernwater.co.uk](mailto:SouthernWaterPlanning@southernwater.co.uk)>  
**Subject:** RE: WWTW Inquiry 2018 - TN26 1LF  
**Importance:** High

Hi Vanessa – thanks for the reply and on a Sunday too!

Thank you too for the pdfs which confirms SWS position along with the Natural England advice. My concern though on May Street is that the WWTW serves a catchment (Oyster Coast Brooks) that Natural England says is outside of their Nutrient Assessment advice whilst it outfalls to a catchment (Stour Marshes) that is also outside of the advice but yet the May St WWTW appears in Table A1.2 of the Advice document. I am trying to understand why as the WWTW seems to connect to the Hogwell Sewer which in turn flows down to the Stour via the River Wensum and misses the Stodmarsh Designated sites completely so on face value shouldn't be an issue.

We have a lot of sites in the area and it is crucial to understand what exactly happens so anything you can do to confirm this will be very helpful.

On the matter of two WWTWs but with one being decommissioned – it appears from latest Google Earth imagery that the old, smaller WWTW is on the same site as the newly improved larger May St facility – I believe Barhale have been working on it very recently for SWS. Again anything you can do to shed some light on this would be really helpful as I am trying to ensure that no one is in breach of the NE Advice or the Habitat Regulations that triggered this latest advice. So knowing where the active outfall discharges is crucial to a lot of sites and a lot of people.

Thanks again for all your help and do call if a chat is easier than emails back and forth.

Regards

**Roland Cooper**  
**Director**  
**B.Eng, C.Eng, MICE, IMAPS**

**Considine Limited, 25 Hollingworth Court, Turkey Mill, Ashford Road, Maidstone, Kent ME14 5PP**  
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**mob: 07711 249229**  
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**From:** southernwaterplanning <[SouthernWaterPlanning@southernwater.co.uk](mailto:SouthernWaterPlanning@southernwater.co.uk)>  
**Sent:** 13 November 2020 16:02  
**To:** 'roland@considine.co.uk' <[roland@considine.co.uk](mailto:roland@considine.co.uk)>  
**Subject:** RE: WWTW Inquiry 2018 - TN26 1LF

Good afternoon Roland,

I have checked our mapping database which shows two WWTW's, however, one has been decommissioned. Is this what you were looking to confirm? If not I have attached information to assist you in your investigations regarding outfalls.

Kind regards,

Vanessa Blackwell  
Planning Coordinator for Kent, Developer Services

T. 03303030119  
M.  
southernwater.co.uk



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**From:** Roland Cooper [<mailto:roland@considine.co.uk>]  
**Sent:** 12 November 2020 13:46  
**To:** southernwaterplanning <[SouthernWaterPlanning@southernwater.co.uk](mailto:SouthernWaterPlanning@southernwater.co.uk)>  
**Subject:** RE: WWTW Inquiry 2018 - TN26 1LF

Hi Vanessa – thank you very much for the prompt turnaround on these.

On May Street I believe there may be two outfalls? When calculating nutrient loads we need to know what goes where – is there anything you can offer as further detail please?

Thanks again and do call if a chat is easier than emails back and forth.

Regards

**Roland Cooper**  
Director  
B.Eng, C.Eng, MICE, IMaPS

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