

From: [REDACTED]
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice
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Hi Sue

As a follow-up, and just for the avoidance of doubt in case this was lost in rest of the justification, Watercycle is more than happy to work with the Environment Agency to derive EALs and complete a quantitative impact assessment of PFAS and other metal emissions that do not have prescribed EALs. However, we do require the supporting data to make this assessment feasible, which does not exist either in EA guidance or wider literature at present. We believe that the LEP would be the most suitable means of supporting this process.

Many thanks

From: [REDACTED]
Sent: 13 March 2026 09:58
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Hi Sue

In principle, whilst Watercycle is happy to consider deriving its own EALs, we are concerned about the time implications of the request to derive an EAL as part of the application process and how this approach seems to differ significantly to other recently submitted Duly Made applications that address activities involving recycling of battery components where risks of PFAS and other metal emissions to air are equally, if not more so, relevant.

For example, in the application by Suez for Sidegate Lane Battery Recycling Facility (ref. EPR/XP3092NX) which was Duly Made, and with the application consultation period opening on 2 December 2025, Suez has not provided an assessment of PFAS or metal emissions to air in its air emissions risk assessment and instead stated it would propose to gather more data on these emissions as part of an Improvement Condition. Similarly, an application by DEScycle for metals recovery of WEEE (ref. EPR/XP3429LR/A001), which opened consultation on 14 January 2026, did not provide a quantitative assessment of PFAS emissions for the application, instead only assessing such risks qualitatively and proposing that “*During the first 6-12 months of operation, a testing plan for PFAS compounds in the PCB e-waste feedstock inputs as well as the process solvent, products and waste will be undertaken.*”

Logika has previously been involved in the process to derive EALs for PFOA and a proprietary PFCEA for an operator in the chemical industry using the methodology you have referred to. Due to the requirement for review initially by the Environment Agency, and then a further period to consult and obtain agreement from UKHSA, this process has taken more than 12 months, and we still do not have final agreement on the EALs proposed. There are also concerns if an EAL is derived by Watercycle, which you state is not transferable, with the inference from this being that each individual operator must derive their own site-specific EAL, that this will not result in a level playing field with different operators having to meet different EALs for the same compound.

Additionally, there is little merit in having an EAL available if there is no quantitative emissions information to support an assessment against that EAL. Logika is currently completing a research study for the Environment Agency that aims to characterise PFAS emissions to air from all sectors regulated under the EPR. This has involved extensive review of academic and grey literature. For battery recycling and recovery of metals from black mass, whilst the literature identifies the potential relevance of the emissions to air pathway for PFAS, there is a paucity of evidence on quantitative emission estimates, particularly at commercial scale.

As a novel technique, part of the rationale behind the request for the LEP was to allow Watercycle to perform limited tests of a beyond lab-scale process to allow quantitative data on emissions and other performance levels to be obtained to support a permit application. If there is going to be an expectation that Watercycle must derive an EAL and provide quantitative impact assessments as part of a permit application, the LEP becomes an essential first step in supporting this.

The site will only accept refined black mass which reduces the potential for PFAS to be present, as binder material and electrolytes containing PFAS will have been removed in upstream off-site processes. However, as stated in the information supporting the LEP, the design does acknowledge that there is at least the potential for PFAS and metals to be present in some of the discharges to air and suitable abatement measures have been incorporated into the design. Of the three emission points, only A1 (black mass loading LEV) is likely to be relevant for metals and PFAS, and the extract system on A1 will contain both a primary bag filter and secondary HEPA filter, with further abatement of any gaseous organics and certain inorganics in an impregnated activated carbon filter.

Once added to the reactor, the design intent and process chemistry of the leaching reactor is that all metals remain in solution as oxides or hydroxides for subsequent extraction and recovery. At the reactor design conditions (i.e., max temperatures < 65°C) there is no thermodynamic or kinetic pathway for metals or their salts to volatilise into the gas phase. The process involves slow mixing, reducing the potential for emissions via aerosolisation. All the metal ions that will be present in the reactor solution are strongly solvated and do not partition to air. The low temperatures also mean there is no viable pathway for fluoropolymers that may be found in low quantities in any residual binder material to undergo thermolysis and form degradation products such as TFA, PFOA etc.

Watercycle is more than open to deriving EALs and performing quantitative impact assessments once it has had the opportunity to obtain robust, quantitative emissions data. If these initial trials cannot be progressed under an LEP, we would instead request that this be included as an improvement condition rather than a requirement of the application. There is currently no robust means by which Watercycle could obtain quantitative emission estimates for substances that do not have a defined BAT-AEL/ELV before operations commence, whilst the time required to support the derivation of an EAL to support the application itself will significantly impact the viability of developing this process in the UK as further funding from investors is now contingent on an environmental permit being in place, or agreement to commence the trials under an LEP.

The purpose of the additional pre-app request was not simply to discuss potential approaches to PFAS. We also have a series of other questions we would like to explore with the Environment Agency to support design development and the application process. As such, can we please request again that a meeting is convened to discuss these matters?

Best regards

[REDACTED]

From: [REDACTED]
Sent: 12 March 2026 16:16
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Dear Adam and Keith

Rest assured that in spite of unpaid invoices, I have been addressing the issues raised in your pre-application request as part of the team discussing the LEP in Area.

You will have seen the government's recent PFAS Plan [PFAS Plan - GOV.UK](#) which is directing how the Environment Agency should have regard for the emerging technical knowledge in relation to PFAS i.e. how do we translate the requirement to assess risks to air, land and water from waste sources being treated in new ways into permits capable of protecting the environment and human health.

For your black mass process, it is not only PFAS that are unknowns, but there are also other compounds (Lithium, Cobalt) where we are discussing an approach to risk assessment with the UKHSA, who we would always consult on these matters. Deriving standards to inform robust risk assessments is an onerous, resource intensive task which is currently under discussion for how to progress this.

On that subject - I will ask if Watercycle would consider developing Environmental Assessment Levels for those compounds relevant to your proposed activities? We have an agreed methodology to follow and any self-derived EAL is only applicable at the site where the process is taking place so any work/resource would be for your own benefit. **Importantly – whilst I am calling it an EAL, we would consult on the final figure and the methodology with the UKHSA with a view to establishing if the figure could be used in the permitting process where the UKHSA were satisfied emissions at that level would not cause a risk, it would not be an approved EAL as such. Nor is it transferable.**

This is likely to be a course of action we would advise as part of pre-app anyway. [Methodology for the scientific derivation of environmental assessment levels: summary - GOV.UK](#) We are treating operators in the carbon-capture sector in a similar way; to self-derive "EALs" relevant to their processes, meaning this is not an unprecedented ask for a sector, although not one currently agreed as an approach for black mass recovery.

EALs aside, there are remaining significant challenges with black mass recovery and any advice I ultimately provide to you needs to be given from a signed-off policy position, with a recognition it is given from an interim position and guidance may change as we become more technically knowledgeable. You are not alone in asking these questions and there is a working group established to support the applications we are receiving both for permits and for pre-app advice.

I am not in a position to agree any dates for meetings at this stage but one of my priorities is to be able to advise you as soon as possible on the things that I can actually give advice for; I will also be able to tell you what the position currently is for those aspects of your operations where advice is not so clear – this may be where self-derived EALs fits in.

I will be in touch as soon as I can with progress and next steps, "self-derived EALs" notwithstanding.
Kind regards
Sue

[REDACTED]

From: [REDACTED]
Sent: 11 March 2026 11:01
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Hi Sue

You hopefully will have seen that Watercycle has now received the invoice and is prioritising this for payment, subject to inclusion of PO number on the invoice.

Would it be possible to discuss some date options for us to meet so we can be securing diary availability pending receipt of the payment?

Many thanks

[REDACTED]

[REDACTED]

From: [REDACTED]
Sent: 02 March 2026 10:07
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Thank you Kevin for your clarification. Once again, I wish to assure you we want to support your technologies and are working towards a way forward to allow you to progress as fast as possible given our current regulatory understanding about the risks it may pose.
regards
Sue

From: [REDACTED]
Sent: 27 February 2026 16:49
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Warning: The sender of this message could not be validated. Please use caution when opening any message content such as attachments or links

Hi Susan
Many thanks for clarifying the invoice situation and the discussions you have held with the local team regarding the LEP.

With regards to the LinkedIn post you have read I can reassure you that the material we have processed does not originate from any of the sources you have referenced in your e-mail, nor does it originate from any other process whereby it can be classed as effluent or wastewater.

The communication was a PR exercise that formed part of an investment round we were preparing, and which was posted to promote our technology and plans to produce materials from the sources you have referenced once we have the regulatory approvals and permits in place. As we have previously discussed in our first pre-app discussions this is a novel technology, and it is key that we promote the business and our plans to a wider audience when the opportunity arises. We will ensure that all future communications of this nature are clear and do not create any misunderstandings and/or ambiguity. We also welcome the feedback and continuous dialogue with the EA as we progress with our plans and the permitting application process.

The water we have processed for an initial R&D trial is a raw material that we have received from one of our current partners and which is not classified as a waste. The exercise was progressed under the exemptions in the EPR for installations or plant "used solely for research, development or testing of new products or processes" and has allowed us to determine the effectiveness of our plant and technology, and where necessary make some initial system or design alterations in readiness for when we can commence commercial operations in the future. For the avoidance of doubt, no commercial gain has been or will be made from this initial R&D trial. Although this initial trial only focussed on the water process, the learnings will also help us in the final design of the black mass system which we will no doubt discuss during our second round of pre-app conversations. Again, for the avoidance of doubt, no black mass has or will be accepted at the site pending resolution of the LEP or permit application.

Regards

[REDACTED]

From: [REDACTED]
Sent: 27 February 2026 11:12
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Quick update – billing queries are resolved at our end. You should receive an invoice for £1025 shortly. In the meantime, I met with Area this week to discuss the LEP. That remains an Area responsibility to progress. Second preapp request is already underway as part of my work allocation. I will be in touch with information/queries as soon as possible.

I do have a query now though – I saw a press release from Watercycle Technologies yesterday – can you confirm if you have an LEP or agreed regulatory position on a trial for this please? Am I correct in assuming this is treating effluent connected with mining the virgin lithium ore or is it actually effluent received from activities shredding Lithium ion batteries or black mass?

[Europe's First Commercial Direct Lithium Extraction Plant Switches On in the UK, Achieving a Global Milestone in Critical Minerals — Watercycle Technologies](#)

Thanks
Sue

From: [REDACTED]
Sent: 25 February 2026 09:35
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Thanks Kevin – leave it with me.
Sue

From: [REDACTED]
Sent: 25 February 2026 09:21
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Warning: The sender of this message could not be validated. Please use caution when opening any message content such as attachments or links

Hi Susan
Thanks for the update, and the confirmation that you are prioritising our applications.

With regards to the invoicing we have not received any communication either in writing or electronically from anyone within the revenue team or Emma Pharoah.

Regards



From: [REDACTED]
Sent: 25 February 2026 09:15
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Morning Adam and Kevin – I did as it happens, they sent me a list of several E&B colleagues who had added time to the project code without my knowledge (happens all the time since technically E&B don't charge for their time but still have to record it). This is not necessarily wrong but if they have charged time, then a) you should have been provided with something written and b) they should have understood how much their advice would cost and informed you.

Therefore – can you tell me if you have had any communications from Emma Pharoah? If so, were you aware it may be chargeable?

I can sort it out at my end but need to understand what the final costs will be – for the pre-app advice I gave you, I logged 10.25 hours but there is still an outstanding 2 hours from another permitting colleague who is on leave so I can't tell if he has logged those hours or not. I understood the pre-app advice from Permitting to be at a cost of £1225.

Let me know if you received anything from Emma. In practice I am currently working on the pre-app since I am involved in the LEP with Phil Goodwin so be assured we are making Watercycle a priority.
Sue

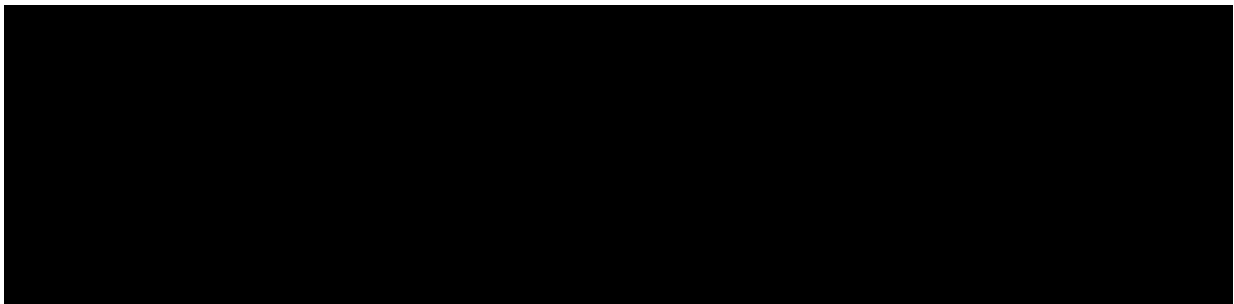
From: [REDACTED]
Sent: 25 February 2026 08:59
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Morning Sue

Did you receive any update from your revenue team? Watercycle can still find no evidence of an invoice being received from the Environment Agency.

Many thanks

Adam



From: [REDACTED]
Sent: 19 February 2026 13:20
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Hi Adam – I am querying it further with regards to an invoice date with our revenue team. I'll get back to you.
Thanks
Sue

From: [REDACTED]
Sent: 19 February 2026 12:45
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Hi Sue

Good to hear that you will be picking this up again.

I have just spoken to Kevin and neither he nor his accounts team have a record of receiving the invoice. Do you have a copy to hand, or can you ask your accounts to re-send directly to Kevin (feel free to cc me in so I can monitor) and we will expedite the payment.

Many thanks

Adam





From: [REDACTED]
Sent: 19 February 2026 12:26
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Hi Adam

Just to let you know I have picked up your second pre-application request (EPR/YP3129ME/P001). This is filed as a different reference due to no record of the bill for the previous pre advice being paid (EPR/PP3322LR/P001) when the advice was issued on 22/11/2025.

Could you confirm please that Watercycle have received their bill and if they have paid it but our systems have yet to catch up? Outstanding charges affect our ability to do additional work and I am due very soon to be involved in the technical aspects of the LEP request you have in with our NW Area team. I need to be sure you receive consistent advice for this LEP as well as the pre-app.

Kind regards
Sue

From: [REDACTED]
Sent: 19 January 2026 09:49
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Hello Adam

Thank you for your email and its good to hear Watercycle are still making progress with their proposals. I think this is better dealt with as a new pre-application advice request and I can look out for it for allocation to my team.

It is important to note though that pre-operation/improvement conditions are unlikely to be approved as such at pre-app – we are careful not to pre-empt determination in pre-application discussions so all I can say is that the principle of pre-op/improvement conditions exists but whether they form part of any issued permit is not guaranteed.

I would also say that as our technical understanding grows, of how accepted waste streams should be characterised with reference to PFAS, we are starting to require applicants to demonstrate sound sampling strategies and an understanding on how their process effects PFAS in air emissions, effluent discharges, wastes and residues with a view to an informed risk assessment. There is shortly to be published a new government methodology for managing PFAS in the water environment and we will expect this to be part of any risk assessments accompanying applications.

Further, applicants should understand what air emissions are likely from each stage of any processing and be able to assess the risk to the environment/human health are prevented/mitigated using the H1 screening tool/AQ modelling. It is likely that there will be substances for which there is no background or Environmental Assessment levels (EALs). You should be prepared to propose proxies in accordance with our published guidance and possibly even to derive site specific EALs. I would hope to advise further at pre-app based on similar proposals.

I can advise further on these aspects at pre-app.
Kind regards
Sue

From: [REDACTED]
Sent: 14 January 2026 12:00
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Hi Sue

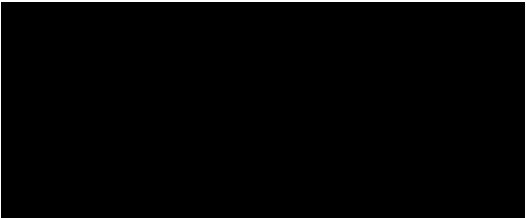
You may have seen that we have provided additional information to Phil to support the LEP request. Separate to that process, we are keen to make progress with the full application should the LEP not be approved.

To support the development of the application documentation, we would like to engage with you for a further round of enhanced pre-application consultation to discuss and hopefully agree the following aspects prior to submitting the application:

- Complete list (and number) of applicable Schedule 1 activities and DAAs (and associated application fees)
- Ability to propose certain elements as pre-operational or improvement conditions should the LEP request not be approved. Given the novel nature of the proposed process, there is certain data that cannot be determined with the certainty required prior to the commissioning of the process. The intent behind the LEP was to allow these data to be gathered to support the permit application
- Agreement on the relevant benchmark emission levels for the point source emissions to air given the multiple BATC/appropriate measures that are potentially applicable and the associated overlap

I'm happy to complete the online request form again but wanted to give you the heads up first and to ask whether you would also be willing to pick up this second round of consultation for consistency?

Many thanks



[REDACTED]

From: [REDACTED]
Sent: 06 November 2025 10:38
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice

Hello Adam and Kevin

It was nice to meet you both yesterday and very interesting to hear of Watercycle's plans. I have spoken with Phil Goodwin who has sent me the emails requesting further information on your proposals. All the information that Phil is requesting is valid and is the advice you would have received as part of a pre-application response, with the exception of a request for information concerning the potential for PFAS to be part of the shred composition and in the trade effluent produced by waste operators shredding Li-ion batteries. We would refer you to the Appropriate measures guidance for developing an emissions inventory and the need for robust, well understood waste acceptance criteria for understanding the composition of the black mass and the effluent you received with reference to POPs and PFAS (you may be aware of the draft AM recently consulted upon for treatment of Waste Batteries – which is an excellent document despite being in draft to indicate how we would approach these issues).

The LEP is an Area decision to grant and I am working with Phil and E&B colleagues to move this forward.

With respect to the pre-application advice, I will respond in writing to the questions posed in your request but it seems logical that my response should cover how you can proceed with either an LEP, a permit application or both. If Area refuse your LEP, and you need to apply for a permit, I would like to be in a position to advise you on the scope of emissions and associated monitoring and risk assessments to help make your application successfully duly made and determined. To give comprehensive advice and guidance I will need input from my E&B colleagues in the same way an LEP would need their support.

Ahead of a formal pre-application response, below is a summary of our discussion yesterday on your other pre-app questions:

Staged Application

During our meeting yesterday we talked of the possibility of staged application, which I explained still required a timeline for proposals to submit key documents and information to move to a duly-made application on a time and materials basis (£100/hour spent on assessment) – I still think this is not the recommended route for you given the information required for an LEP – you may as well apply for a new bespoke permit but that is your decision to make depending on length of time for trials if granted and the volume of black mass/effluent you wish to treat.

Mobile Plant

You also asked about mobile plant for a modular black mass recovery process and we stated this was not something we would support in the short term. If it was developed and introduced to sites shredding batteries, a variation to their permits would be required to add the recovery processes as stationary units.

Scheduled activities

Finally, the scheduled activities are considered to fall under *EPR, S4.2 Inorganic chemical activities* but to advise you fully on the number of S4.2 activities that would apply and the associated costs, we would need more detailed process flow diagrams to agree when products were formed that were sold for commercial gain and when the products of a reaction moved further through the process before the final product was available. If at any point you are able to produce a metal that can be sold without further refining, this may attract a S2.2 non-ferrous metal activity and if you were to consider doing any form of battery shredding, that would need a waste treatment activity which could be a S5.4/S5.3 waste management installation activity or, if below threshold, a waste treatment operation.

Once again, please be assured we wish to support this proposal and are working to find the best way forward for Watercycle.

Kind regards

Sue

[REDACTED]

From: [REDACTED]
Sent: 05 November 2025 09:21
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Thanks, Sue. I have forwarded the invite to Kevin English (Watercycle HSE Manager).

Best regards

Adam

[REDACTED]

From: [REDACTED]
Sent: Wednesday, November 5, 2025 8:52 AM

To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Hi Adam – no problem with that – let me have their name and I will set up a Teams call.
Sue

From: [REDACTED]
Sent: 05 November 2025 08:11
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

[REDACTED]

Hi Sue

Yes, 1pm works fine for me. Would you have any objection if I also asked Watercycle's EHS Manager to join this initial call? He may be able to provide further insights into certain questions that I may not be able to answer without first consulting with Watercycle.

Many thanks

Adam

[REDACTED]

From: [REDACTED]
Sent: Tuesday, November 4, 2025 4:48 PM
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Thanks Adam – I understand your wish to meet and I am not suggesting that is not necessary but I have a few questions to ask ahead of any meeting that will help to focus the advice you receive.

Would you be available tomorrow afternoon, say 1pm?
Kind regards
Sue

[REDACTED]

From: [REDACTED]
Sent: 04 November 2025 16:29
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Thank you for the update, Matthew.

Sue – as previously discussed with Matthew, due to the novel nature of the process, particular that for the recovery of lithium carbonate from wastewater, we would prefer to convene a meeting to run through the process in more detail and answer any queries you may have in that forum in the first instance. We feel this would be more productive than written Q&A through email, although of course would be more than happy to answer any further queries after the meeting. I would be grateful if you could let me know whether this is still possible and when you might have availability to discuss.

Many thanks

Adam

[REDACTED]

From: [REDACTED]
Sent: Tuesday, November 4, 2025 1:36 PM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Hi Adam,

I hope you had an enjoyable period of leave.

I have spoken to Sue (copied in), the pre-application has been passed to the team in which Sue works. The manufacturing team within installations permitting. She will contact you to discuss some initial queries she has about the application and activities.

Apologies for any inconvenience this causes.

Kind regards,

Matthew

From: [REDACTED]
Sent: 04 November 2025 09:49
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Hi Matthew

Have you been able to confirm any available dates with your colleagues in E&B for the pre-application meeting?

Many thanks

Adam

From: [REDACTED] >
Sent: Thursday, October 16, 2025 9:09 AM
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Thanks Adam

From: [REDACTED]
Sent: 16 October 2025 09:03
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Morning Matthew

I asked this very question to Watercycle last week as I appreciate it will be beneficial for your review and subsequent discussions. I was informed that PFDs are being finalised and should be available shortly. I will check in again this morning to ascertain what the latest status is.

Many thanks

Adam

From: [REDACTED]
Sent: Thursday, October 16, 2025 9:00 AM
To: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052

Morning Adam,

Thank you for the declaration. I am considering who will be best placed to discuss the application with you. In order to assist with this is there any further technical information or process flow diagrams etc you would be able to share with me?

Thanks in advance,

Matthew

From: [REDACTED]
Sent: 15 October 2025 15:55
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: EPR/PP3322LR/P001 Enhanced pre-application advice initial cost estimate CRM:0305052