

23 August 2022

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Chief Knowledge Officer  
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**Via: DPE Planning Portal**

Dear Mitchell

**Western Coal Services (SSD 5579) – MOD 4 RTS**

In December 2021, Springvale Coal Pty Limited (**Springvale**), for and on behalf of the Western Coal Services Project, submitted a modification (**MOD 4**) to State Significant Development (**SSD**) 5579 to enable, amongst other things:

- construction and operation of the Springvale Coal Services Site (**SCSS**) Water Transfer System including the transfer of water from the SCSS Water Transfer System
  - to the SCSS/Regis Transfer System for use at the McPhillamys Gold Mine;
  - to MPPS for treatment and reuse within the MPPS cooling water system;
- receipt of raw water from the Angus Place Water Transfer System for use in the coal preparation plant at SCSS;
- changes to the on-site water management system at SCSS to;
  - facilitate the transfer of land from Springvale Coal back to EnergyAustralia (**EA**); and
  - improve the quality of water discharged to Wangcol Creek, required by a Pollution Reduction Program (**PRP**) currently tied to the SCSS Environment Protection Licence
- an increase in the capacity of the Washery Dam at SCSS; and
- administrative changes to SSD 5579 Condition 45.

On 14 March 2022, Springvale received, via the Department of Planning and Environment (**DPE**), feedback from the DPE-Water (as well as other Government Departments) relating to the MOD 4 proposal, requesting further information. On the 24 June 2022, Springvale provided a Response to Submissions Report addressing those requests for further information. On 29 July 2022, further information and clarification regarding the MOD 4 proposal was requested by DPE-Water (Your ref: OUT22/9260). The purpose of this letter is to address those outstanding matters raised by DPE-Water. They are addressed herein under the headings provided.

**Water Entitlement**

**Information Request** – that the proponent demonstrates sufficient surface water entitlement can be obtained for the projects water take from pumping water out of the Huon Clean Water Pond and

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DWP-A (Dirty Water Pond – A). The Department advises there are significant limitations in entitlement availability in the relevant water source and recommends this be acknowledged as a significant risk and addressed prior to determination.

It is recommended that the proponent initially consider the viability of acquiring entitlement within the water source, and if this is not viable, consider alternative designs for the project to minimise water take.

## Response

The SCSS is located within the Upper Nepean and Upstream Warragamba Water Source – Wywandya Management Zone (**WMZ**). The DPE-Water report card for the Wywandya Water Source (DPE, 2022) and a search of existing entitlements within it shows:

- A total of 26,714ML<sup>1</sup>/year is available, of which there are existing entitlements (with no ability to deal/trade across licence category). Component shares (units or ML) of the available water includes:
  - o 25,000 (units) ML/year (for the purposes of power generation) – licence category: Major Utility licence,
  - o 1,503 (units) ML/year as domestic water take – licence category: domestic and stock licences,
  - o 211ML/year – licence category: unregulated River access licences
    - 145 (units) ML/year owned by a single holder,
    - 58 (units) ML/year owned by other private owners,
    - 8 (units) ML/year unknown.

Springvale acknowledges that there are significant limitations in entitlement availability within the WMZ. Further investigations regarding surface water WALs held by Centennial revealed that Ivanhoe Coal Pty Ltd (**Ivanhoe**), a subsidiary company of Centennial, holds 146 units (or ML/year). **Table 1** below provides the details of these licences and the status of the associated Works Approvals.

**Table 1. WALs and Works Approvals held by Ivanhoe**

WAL Number	Units	Associated Works Approval	Status of Works
25659	145	10WA102715 – Diversion Works - Pumps	Not in use
25774	1	10WA102993 – Diversion Works - Pumps	Not in use

The licences and approvals set out in **Table 1** allow surface water take from the existing Pipers Flat Creek Dam. A review of water take over the last three years shows that there has been no take ie. these WALs have not been used. Furthermore, Centennial has confirmed that there is no need for Ivanhoe to take the water into the future and that the WALs could be made available to other Centennial operations if required. On the basis that there has been no use and there is no forecast use of share components, there is an opportunity for Springvale to use them. This could be done through a dealing/trade where Springvale purchases the necessary WAL units from Ivanhoe.

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<sup>1</sup> 1 ML/year = 1 share component / unit

Based on the water balance model presented in the MOD 4 water assessment, a maximum of 137 ML/year is predicted to be pumped out of the proposed Huon Clean Water Pond and a maximum of 15 ML/year is predicted to be pumped out of the proposed DWP-A sump. The available 146 units are sufficient to support the maximum predictions associated with the Huon Clean Water Pond. However, the remaining 9 units are not sufficient to support the maximum predictions associated with the DWP-A sump. An additional 6 units would be required.

Water reporting to the DWP-A sump comes from runoff and spillage falling underneath and immediately adjacent to an existing coal conveyor. The purpose of the DWP-A sump is to :

- Stop coal contamination (conveyor generated carry back, fines and lumps) from potentially entering the neighbouring property (EA's Ash Repository Water Management System); and
- Separate this localised dirty water catchment from beneath the conveyor system from entering the SCSs clean water management system.

The DWP-A sump is located at the lowest point in the topography, which happens to be in alignment with a third order water course, to enable the simple collection of the dirty water. Given this topography, alternative locations are very limited and technically far more complex to implement successfully. One alternative considered requires a combination of separate smaller sumps intersecting the dirty water catchment to the east and west of the third order stream, combined with a launder system suspended beneath the conveyor to capture and funnel carry-back into these sumps.

Alternatively, passive capture and control of the coal contamination (**passive management**), through a combination of sediment fencing, coir logs, improved conveyor belt wash sprays and periodic mechanical clean out of the area beneath the conveyor has been considered and discussed favourably with EA. Whilst this would greatly reduce coal contamination solids reporting into EA's Ash Repository Water Management System, it does not remove the transfer of the dirty water itself.

The overland conveyor, was designed and built in the 1990's with the surrounding topography in mind. This includes locating dirty water management structures in locations where gravity can deliver the water and engineered structures can capture and manage the capture of the water. The current arrangements capture any dirty water generated from beneath the conveyor, directing it downhill into the Huon Gully, near the location of the proposed Huon Clean Water Pond and DWP-A. The proposed DWP-A sump will intersect this dirty water (along with other under conveyor catchment), and transfer it into the dirty water management system, stopping it from entering EAs land (as described above). With the exception of the passive management described above, Springvale is unable to recommend alternate arrangements due to the complex engineering, and resulting operational constraints, required to establish the proposed DWP-A sump. Therefore, a WAL with 15 units is still required.

Springvale has investigated the opportunity to purchase the additional 6 units. It is noted that there are no units within the WMZ that are currently available to purchase. To this end, Springvale proposes that the requirement to procure a WAL (with a minimum of 15 units of water allocation) and a nominated Works Approval be a condition of consent and that both be procured prior to the construction of DWP-A. This means that the current arrangements associated with this area of dirty water catchment will remain in place, specifically the continuance of the existing Surface Water Transfer Agreement between EA and Centennial, maintaining the general need to implement passive coal contamination controls at the lease boundary (as described above)

A meeting was held with representatives from EA on 11 August 2022 regarding the above-mentioned constraints associated with the construction of DWP-A and the proposed continuation of the existing arrangements. EA had no objections to the continuation of the passive management arrangements and until such time that DWP-A could be implemented.

It is noted that the Greater Metropolitan Region Unregulated River Water Source WSP is currently under review. The WMZ (referred to as the Wywandy Water Source in the draft WSP) lies within this WSP. As a part of this review, DPE-Water carried out a risk assessment to understand the risk of water extraction on ecological values within the streams located within the WMZ. The outcome of the risk assessment was that the WMZ has medium ecologic values and a low likelihood of impact on those ecological values caused by extraction at low flows with an overall low risk to low flows. The current risk rating is high, hence the restricted water availability. Water Planners from DPE-Water noted that this reduced risk justifies freeing up trade and potentially increasing the available shares, however, this will not occur until after July 2023. To this end, it is reasonably foreseeable that the additional 6 units will become available once the review of the WSP has been completed. In summary, Springvale will endeavour to procure the total of 15 units of water required to construct and operate the DWP-A sump in the future.

### **Clean Water Management**

**Information Request** – that the proponent provides further clarification on the management of clean and dirty water separation from the Huon Clean Water Pond into Lamberts Gully. This is to assist in addressing a query originally raised on review of the EIS.

If the water diverted from the Huon Clean Water Pond is clean, it is recommended it be diverted directly into a clean section of Lamberts Gully. Alternatively, if all water captured in the Main Sediment Basin is clean, further clarification is required.

### **Response**

We can confirm that water captured in the Main Sediment Basin is clean. Figures 3.1 and 3.2 (and Figure 5.1 of Appendix A) within the Modification Report presented (amongst other things) the existing surface water management system at the SCSS. Figure 4.2 (and Figure 5.3 of Appendix A) within the Modification Report presented (amongst other things) the proposed surface water management system. The five figures were drawn to show that dirty water is captured within and cascades through SLG5, SLG4, SLG3, SLG2 and then into the Main Sediment Dam. Furthermore, the five figures showed that dirty water flows around the toe of the rehabilitated area to the east of the REA, into SLG1 and then into Main Sediment Dam.

The figures described above are in error. The existing water management system should show clean water captured within and cascading through SLG5, SLG4, SLG3, SLG2 and then into the Main Sediment Dam and clean water flowing in a south easterly direction around the toe of the rehabilitated area to the east of the REA, into SLG1 and then into Main Sediment Dam. In summary, only clean water reports to the Main Sediment Dam. Centennial presented this correction in its Response to Submissions Report, however, further clarification was requested by DPE-Water. To that end, Centennial presented the above mentioned correction and provided a detailed explanation to better clarify the errors during its meeting with DPE-Water and the DPE on 18 August 2022. The pertinent slides presented at this meeting are provided in **Attachment 1**. The corrected surface water management figure is presented in **Attachment 2**.

### **Post Determination Recommendations**

**Table 2** presents the post determination recommendations and also presents Springvale's response to the recommendations.

**Table 2. DPE-Water Post Determination Recommendations**

<b>DPE-Water Recommendation</b>	<b>Springvale Response</b>
Ensure sufficient water entitlement is held in a water access licence/s to account for the maximum predicted take for each water source (groundwater and surface water) prior to take occurring	Springvale is able to procure sufficient water entitlement as modelled for the Huon Clean Water Pond.  Springvale is currently not able to procure sufficient water entitlement as modelled for the DWP-A sump. Springvale proposes to continue to operate the dirty water catchment area that would ultimately report to DWP-A, as it currently exists (via agreement with EA to maintain passive coal contamination capture controls) until such times as the necessary water entitlement becomes available to purchase. There may be opportunity for additional water entitlement to become available once the Draft WSP for the Sydney Greater Metropolitan Region Unregulated River Water Source are finalised post July 2023.
Ensure that relevant nomination of work dealing applications for WALs proposed to account for water take by the project have been completed prior to the water take occurring	Springvale has no objection to this recommendation
Report on water take at the site each year (direct and indirect) in the Annual Review. This is to include water take where a water licence is required and where an exemption applies. Where a WAL is required the water take needs to be reviewed against existing WALs	Springvale has no objection to this recommendation
The proponent should:	
Develop a water balance to measure the actual water take from surface and groundwater sources, and this should include accurate metering where possible. The water balance should be used in ongoing reviews of actual versus modelled water taken and impact predictions. This will be a key component to confirm impact predictions, the adequacy of mitigating measures and compliance for water take	Springvale has no objection to this recommendation
Be aware of the rules of the relevant water sharing plans and how they may impact the project and ability to trade or take water	Springvale has no objection to this recommendation

## **Impact to Springvale if the Huon Clean Water Pond and the DWP-A sump does not Proceed**

### Huon Clean Water Pond

The NSW Environment Protection Authority (EPA) issued Springvale Coal with a PRP on 18 December 2020 to evaluate options for the long-term management of groundwater being discharged from Licenced Discharge Point (LDP) 001. Historically, clean water upstream of the SCSS has entered SHG1 which has no defined outlet. SHG1 has not been observed to overtop its perimeter bank, indicating there is significant seepage into historical mine workings beneath SHG1. Due to the connectivity of the local groundwater system and the existing surface water management system at SCSS, discharges through LDP001 (which is the overflow from Cooks Dam) are predominantly untreated groundwater, which includes the water from SHG1.

The primary structure to reduce groundwater being discharged via Cooks Dam is to capture the clean water upstream of the SCSS before it percolates into the historic underground workings via SHG1, and then divert that clean water into the existing clean water management system from where it can be released into the Wangcol Creek as clean water.

The Huon Clean Water Pond is essential to achieve Springvale's PRP. It's primary objective and need is to:

- Stop clean water catchment from entering the dirty water management system;
- Separate clean water from the risk of coal contamination and in doing so, reduce the volumes of water reporting to Cooks Dam; and
- Stop excess water volumes from entering onto EAs ash repository water management system.

The construction and operation of the proposed Huon Clean Water Pond is a net benefit to the environment by reducing the pollutant load into Wangcol Creek. Furthermore, it will allow Springvale to achieve its requirements and commitments as set out within the PRP. If the Huon Clean Water Pond is not approved, Springvale will not be able to achieve its PRP.

### DWP-A

The objective and need for the DWP-A sump has been discussed above. It has been proposed to improve the overall water management system at the SCSS. If the DWP-A sump does not proceed, Springvale can continue to manage the dirty water and debris collected by the existing structure and passive management which includes passive coal contamination controls at the lease boundary.

Should you require any further information, please do not hesitate to contact me.  
Yours sincerely



**Edwina White**  
Group Manager Approvals  
Centennial Coal

Encl.

Cc: Gabrielle Allan (Team Leader, DPE), Kevin Reid (Assessment Officer, DPE)

Attachment 1







## Attachment 2



Plotfile: N:\SHARED\GDA\_2020\Plot File PDF\FASS\10060\_SCS Existing WMS\_20220614.pdf

Esri Community Maps Contributors, Esri, HERE, Garmin, METI/NASA, USGS, Maxar. Source EMM (2022). Drawn D.MacBain. Checked and Approved E.White 14/06/2022.

## KEY

- Springvale Coal Services Site
- Licensed Discharge Point
- TT03 Sump Pipeline
- Surface water flowpath (clean)
- Surface water flowpath (dirty)
- Surface Water Storage
- Existing Environment
- Roads
- State Forest

## Strahler Stream Order

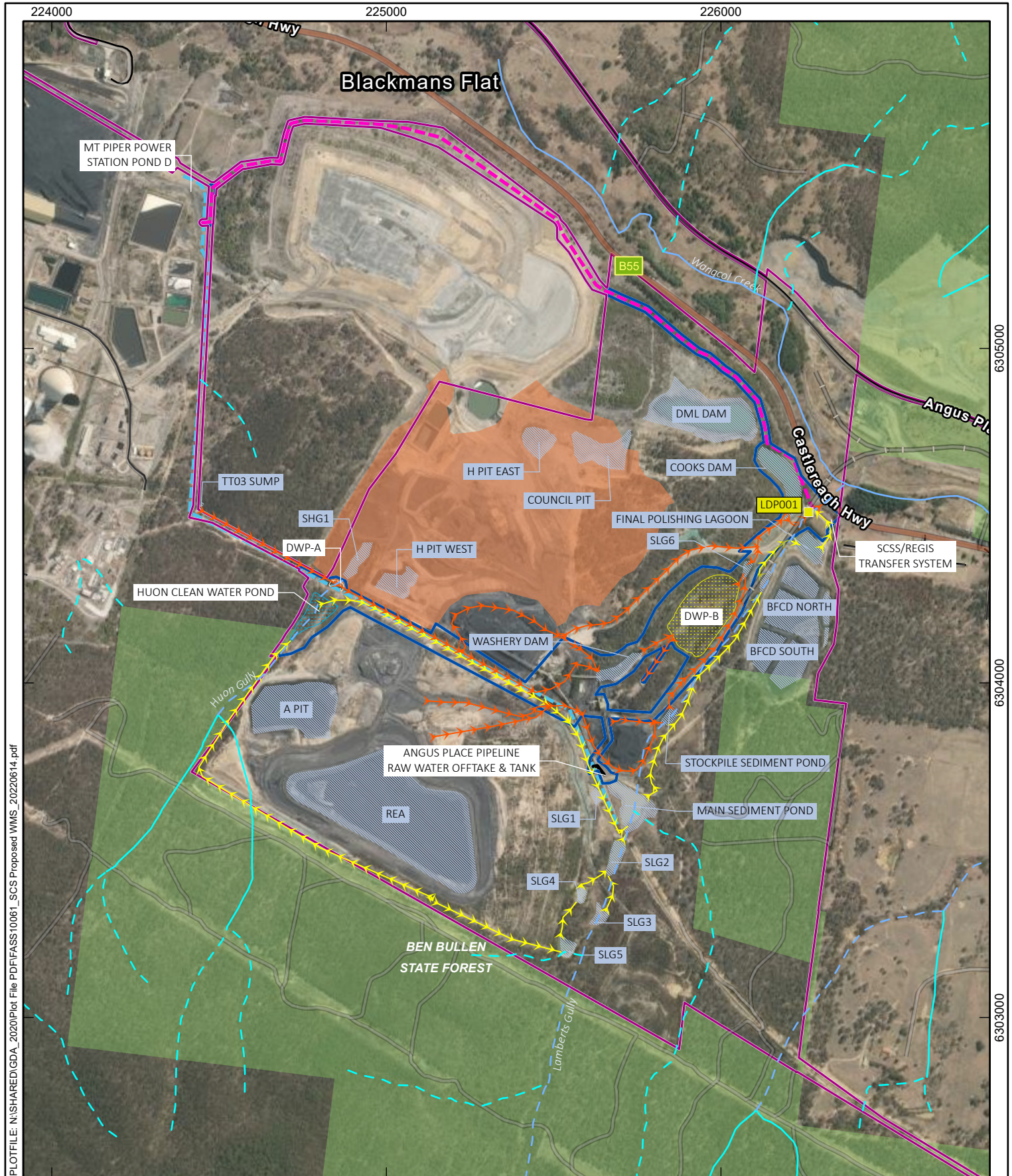
- 1st order
- 2nd order
- 3rd order
- 4th order

## Springvale Coal Services Existing Water Management System

Western Coal Services Project  
Figure 2







Esri Community Maps Contributors, Esri, HERE, Garmin, METI/NASA, USGS, Maxar. Source EMM (2022). Drawn D.MacBain. Checked and Approved E.White 14/06/2022.

## KEY

- Proposed project application area
- Licensed discharge point
- Construction Envelope
- Indicative Angus Place Raw Water Pipeline Project
- Surface water storage
- Surface water catchment to be managed by Energy Australia

- Proposed modification elements
- Bidirectional pipeline
- Offtake from Angus Place Raw Water Pipeline Project
- Proposed surface water flowpath (clean)
- Proposed surface water flowpath (dirty)

- Huon Clean Water Pond
- DWP-A
- DWP-B
- Proposed as part of SSD-9505
- McPhillamys Gold Project pipeline easement
- Springvale Coal Services Site/Regis Transfer System

- Existing Environment
- Roads
- State Forest
- Strahler stream order
- 1st order
- 2nd order
- 3rd order
- 4th order

## Springvale Coal Service Proposed Water Management System

Western Coal Services Project  
Figure 3