MEETING MINUTES



SOUTH 32 ILLAWARRA METALLURGICAL COAL APPIN MINE COMMUNITY CONSULTATIVE COMMITTEE

MEETING: # 56

LOCATION: Microsoft teams
DATE: 2 November 2021

ATTENDEES: Mike Archer (MA - Chair)

Sam Davis (SD)
Barry Durman (BD)

Peter Chaffer (PC) – intermittent (internet issues)

Shane Simpson (SS) - left at 5:00pm

Danny Stewart (DS)

Michael McGrath (MM) - joined at 5.25pm

ILLAWARRA METALLURGICAL COAL: Antony Leone (AL – South32 Community)

Liam Stower (LS – South32 Community)
Chris Schultz (CS – South32 Environment)
Andy Hyslop (AH – Appin General Manager)

Kathleen Swinbourne (KS – South32 Community)

Glen Alsemgeest(GA -Project Manager)

APOLOGIES: Sharyn Cullis (SC)

Noel Lowry (NL – Council Representative)

PURPOSE The purpose of the Community Consultative Committee is to facilitate and maintain two-way communication between South32 Illawarra Metallurgical Coal (IMC), key stakeholders and local residents. It is to promote open discussion on the activities of South32 Illawarra Metallurgical Coal's Bulli Seam Operations, including underground mining and surface operations of Appin Mine; environmental performance and community relations; and to keep all stakeholders informed on these matters. AGENDA Welcome, Acknowledgment of Country and apologies Declaration of Interests · Acceptance of Previous Meeting Minutes / Business Arising from previous Meeting Minutes · Questions on Notice Tracker Update from South32 Illawarra Metallurgical Coal Community Illawarra Metallurgical Coal Operations o Appin Mine Ventilation & Access project update o Environment o Exploration / Approvals General Business o 2022 meeting dates Meeting close MA acknowledged some shuffling of the Agenda by S32 since the draft was issued – content is unchanged. WELCOME / APOLOGIES MA opened the meeting at 4:00pm and noted apologies from Sharyn Cullis and Noel Lowry. MA provided the Acknowledgement to Country - "Illawarra Metallurgical Coal and the Community would like to acknowledge the Traditional Owners of the land on which we meet this evening, the Dharawal People, and pay our respects to Elders past and present and emerging. DECLARATION OF INTERESTS / CORRESPONDENCE MA declared he receives payment from South32 Illawarra Metallurgical Coal (IMC) to fulfil the role of Independent Chair. It is a requirement of the Government CCC Guidelines that this be noted and stated in the minutes at every meeting. No further declarations were noted by the committee. 5 PREVIOUS MEETING MINUTES AND BUSINESS ARISING The Chair advised all members that individual members are not authorised to make comments on behalf of the committee, and that CCCs are not decision-making bodies. MA read the relevant section from the Terms of Reference. SD noted that the Chair had advised he would not change the Minutes of the September 2020 meeting in accordance with the document provided by SD. Some discussion ensued on whether Minutes already accepted by the Committee as a true record of the meeting could be changed. The Chair stated that the September 2020 minutes will not be retrospectively changed more than a year after they were accepted by the CCC. SD advised that if that were the case he would not be moving nor seconding minutes in future. The minutes of the meeting of 14 September were moved by BD and seconded by LS. The previous meeting minutes were accepted. There is an Appendix to these minutes re SD's issues with September 2020 minutes. Questions on Notice from previous meeting

Q. SD requested additional information regarding the donation to the Menangle Community Hall

and who it is provided by, whether IMC or CPP. SD noted that this question should stay in the action tracker until answered satisfactorily.

A: AL agreed that questions would remain on the tracker until answered, and that the full tracker would be sent to all members prior to meetings. Conversation ensued around whether the \$10,000 donation came from IMC or from the CPP. SD advised that according to CPP minutes of September 2021 they were considering a donation request for Menangle Community Hall. The question was taken on notice. [NOTE: The \$10,000 donation to Menangle Hall is coming from IMC. The September minutes of the CPP read "Other funding sources are under investigation by the Association which may result in CPP funding not being required. To be removed from future agendas."]

Action: AL to provide full Questions on Notice tracker to the Committee members prior to each meeting.

Q: Any commitment from IMC regarding the painting of timberwork in Mountbatten House? **AL**: This question will be answered in more depth later in the presentation.

COMMUNITY INVESTMENT

KS provided an update on Community Investment:

Community Investment

- We are investigating how we can support the Menangle Carols on the Hill an annual community event well supported by the RFS and local businesses.
- The South West Sydney Academy of Sport provided a detailed summary of its 2020/21 program which IMC support to the value of \$20,000 annually. It saw:
 - 168 scholarships holders in the year
 - 81% of athletes residing in the Macarthur area
 - 56% of members are female
 - While 22% identify as ATSI
- In the 2021/22 South32 and the Academy plan to bring a have-a-go day to Douglas Park to encourage local children to try different sports. These sports include the usual suspects but also things like batton twirling and ten-pin bowling.
- Upcoming activities supported by the business include:
 - Illawarra Convoy rescheduled to 5 December. MC is once again providing the lead truck and motorbike start location at Appin North Colliery. This costs the business about \$25,000 as production is impacted and staff are involved. This annual event is the largest fundraiser in the Illawarra for sick children. We are also encouraging employees and the community to donate to the South32 page SOuth32 is matching donations up to \$50k.
 - Tharawal NAIDOC Family Day rescheduled to 11 December. IMC support the event and will have a stall.
 - Wollondilly Women in Business Excellence Awards March 2022. This will be held at Menangle Park Club and aligns with International Women's Day. Nominations are open until 26 November so if you know a deserving female in the Wollondilly please consider nominating them.
 - Illuminate Wollondilly. Postpones to May. IMC are the Festival Partner contributing \$12,000 to the events. More information is available on the Wollondilly Council website.

CPP

- The CPP has not had a meeting since the last update was provided. They next meet on 12 November.
- Applications to be reviewed at the meeting:
 - Appin RFS youth uniforms, head torches, GRN portable radio and thermal imaging cameras. \$10,200.
 - Picton and Wilton Anglican Church defibrillator which would be available to broad community, not just church members. \$2,427
 - Menangle Store defibrillator which would be available to broad community. \$2,500. This location was identified by CPP members and pursued it will be a defib donated by Appin Mine.

Fundraising

- At the last meeting we mentioned our team was doing a step challenge to raise funds for the Shining Stars Foundation. We took more than 1 million steps, or 857km, which is walking the underground Appin roadways twice and then some.
- We raised a matched amount of about \$1,400 in the process.
- Domestic Violence Refuge which refuge in the Wollondilly to be investigated \$10,000.

7 MOUNTBATTEN UPDATE

AL provided an update on work at Mountbatten House Stables, with before and after photos. He advised that the builder is finished up onsite for now with a few items outstanding:

• Appin Mens Shed have paused work on restoration of windows and doors due to Covid restrictions.

PC asked how the stable has been stabilised?

AL advised that geotechnical engineers have been involved in the construction to ensure stability. They dug down to shore up the base. AL was unsure of the specifics, but the engineers have been looking at safety and long term stability.

General consensus from CCC was the stable works look great.

8 APPIN MINE OPERATIONS UPDATE

AH provided an update on IMC VPO Replacement. Peter Baker joined the team as Vice President Operations (Appin) this month. Having spent the majority of his career in underground coal operations, Peter brings to IMC extensive experience in managing longwall mines to deliver safely and productively. His breadth of experience in Vice President, General Manager and functional Health, Safety, and Environmental roles across a number of operations means he is ideally suited to manage the complexities of the IMC operations.

Peter joins us from Compass Minerals where he currently leads the world's largest underground salt mine in Goderich, Canada. He has previously held senior roles at Peabody Energy, Xstrata Coal and NSW Mines Rescue Service, overseeing significant safety and culture transformations.

Peter commenced his career in the Illawarra at Tahmoor Colliery and has worked at Appin twice during the past 25 years. He will be returning to the Illawarra community where many of his family are located and will be warmly welcomed back by the South32 team.

Appin Area 7 update

- LW 708B commenced in late April 2020. It has progressed about 2,077 metres as at 1 November 2021
- Approx 109m remaining.
- Estimate completion in Q4 2021 CY

Appin Area 9 update

- LW904 commenced 20 May 2021
- As at 1 November 2021 progressed 969m
- There's approximately 1km remaining with a completion date ~June 2022

Action: DS asked for an A3 hard copy of the mine overview plan to be mailed to him. KS to mail

9 APPIN MINE VENTILATION AND ACCESS PROJECT

AL provided an update on the AMVA Project.

<u>Approvals:</u>

Since the last meeting IMC have issued our Submissions Report which became public 7 October 2021 and is available online. The Project is now in the "Assessment Phase" with DPIE.

SD asked if S32 would agree a pit top and mine access is not considered as part of the BSO project?

AL advised that the project is modification of the BSO Consent. Within the BSO approval it does indicate a need for future ventilation & pit top facilities. This is consistent with what's discussed with DPIE.

SD asked when the last pit top was built on Douglas Park Drive.

DS advised it was 1978/79

SD expressed his opinion that there should be a separate application.

AL advised that the approvals pathway was confirmed by DPIE as being the correct path for the Project.

AL advised we are going to continue our consultation/information sessions through 1:1 meetings, hold an additional community information session, and continuing dialogue as per our Community and Stakeholder Engagement Strategy

SD asked questions about how many sessions had been held, how many people had attended, and whether an additional session would be held on Thursday 4 November, and whether other people could still book, and whether there would be a session at Durham Green.

AL advised a total of three separate sessions where held approx: 14 on Friday, 15 on Saturday and 16 on Thursday. There was a late surge on the Thursday so we will hold an additional meeting for those that called up this Thursday. We will provide the exact number of people who had attended sessions. It was good to see a healthy number of people from Durham Green had attended and we will have discussions with Durham Green management about how we could best provide more information. We are waiting for covid restrictions to lift from the Village.

Further questions were asked about where the feedback goes and whether IMC would release feedback. The majority of the interactions was providing Information regarding the Project. Any further actions where captured and responses will be provided. We will look to provide a summary of topics covered – however there was nothing new raised at the sessions.

DS reiterated that the project should be called Menangle because of the location. He stated his opinion that once it is up and running it should be called Menangle once up and running.

AL continued with the visual presentation.

MAP feedback

- Highlight location front page/highlighted
- Community Information Sessions
- Posters given to Menangle Store
- Post-cards distributed (Menangle/DP)
- AMVA Project update at the next BSO Community Newsletter wider distribution
- IMC will look at Billboard/sign at site would be subject to council approval

Images were presented showing the development at different stages of tree/screening growth, and from different viewpoints.

PC enquired about power requirements for the site.

AL/GA responded that overhead existing 11kV along Menangle Road line will be buried; an existing 66kV powerline is proposed by EE to supply power to Menangle development (separate from this Project). The Project will tap into this existing line for operational supply.

Construction emissions

- Modelling predictions indicate that there would be no additional days over the 24-hour average impact assessment criterion for PM10 and PM2.5 and no exceedances of the annual average impact assessment criterion at any assessment location for PM10, PM2.5, TSP and dust deposition.
- Highest predicted concentration of dust during construction closest residence to north of proposed Project (310 Menangle Road). No exceedance.

Operations emissions

- The highest predicted impacts for PM10 and PM2.5 during operations occur at assessment locations to the southwest of the Project.
- When background concentrations are added to the Project increment, there are no additional days over the 24-hour average impact assessment criterion for PM10 and PM2.5.

For annual average PM10 and PM2.5 concentrations, there are no exceedances of the annual average impact assessment criterion at any assessment location.

- The annual average TSP concentrations and dust deposition there are no exceedances of the annual average impact assessment criterion.
- For the assessment of NO2, the atmospheric conversion of NOx to NO2 is accounted for using the ozone limiting method. When background concentrations are added to the Project increment, the highest cumulative 1-hour average NO2 concentration (95.8 μ g/m3) is approximately 39% of the impact assessment criterion.

Odour

- Potential odour impacts are evaluated by modelling emission of odour and hydrogen sulphide (H2S).
- There are no exceedances of the most stringent odour and H2S impact assessment criteria at all assessment locations scenarios.

Dust

• The predicted deposited dust levels for the Project are less than 5% of the relevant criterion for nuisance dust at all assessment locations. Previous studies, as noted below, have shown that dust fallout at levels higher than this do not constitute a risk to locally collected drinking water.

Issues raised by the group were:

Noise:

DS: Will the winder shaft be sound proofed regarding the winder alarm? How loud will it be, particularly at night? Will you look at reducing how many times during the night it will be used? SD: Lights at night as well. 100-150 workers per shift so there will be a lot of traffic & movement

Answer: This was raised at the MAP. We are looking at an engineering solution. While the design complies with noise requirements we are looking at a solution to further reduce noise.

There is a component in the report re traffic noise. Modelling shows noise levels will comply. The shift change increases by 2dB, which is in conformance to the Road Noise Policy (NSW) and should be imperceptible. Shifts are 6am – 3pm / 3pm – 11pm / 10pm – 6am [note: These shift times are clarified [later in the discussion]

Traffic:

SD: the traffic report almost reads like people who wrote it haven't been here. This is a crash zone. 900 pages of modification report and we were given 14 days to read and respond. People are only just starting to get to know and understand. How are you going to deal with the crash zone? There is no confirmation there will be a right turn lane out heading to Menangle.

GA: the upgrade will actually improve the road design which is aimed at improving site distance, and the road will be upgraded and comply with safety requirements from Council and Transport for NSW.

Property values:

SD: Are you going to consider compensating people?

AL: We are working proactively with nearby residents regarding mitigating impacts. Those conversations are currently a matter between these parties and IMC.

Operational time:

SD: How long will this be operational? Only to 2041?

AL: Our current BSO consent is to 2041. Anything beyond that is subject to approvals. The ventilation is required for the immediate future longwalls.

Coal loading:

SD: Would you have included in the approval that there will be no coal loading?

AL: We do not envisage coal handling on the site.

SD: Can you ask that question to whoever can answer it?

Question taken on notice

Location options:

SD: Did you look at due east on the other side of the Hume Motorway?

GA: [displaying map of current workings].

Map showing location of exisiting VS6, Douglas Mains and Simspons Mains. GA explained the mining engineering constraints from the change from dual to single long walls – meaning a termination of Douglas Mains, which is used for primary ventilation. There is also significant geological reasone - The Wandinong fault which runs along the longwall gate roads. We can't put the ventilation shaft on the eastern side of the fault. Criteria for selection of the site were Mine Plan change: single LW configuration; Geology; Ventilation requirements/engineering; Proximity to proposed/future LW; Location along existing/plan roadways; Arrangement of fresh/return airways; Air velocities in UG workings; Available land; Proximity to services (roads, electricity etc.); Minimise impact to community; environment, and heritage. There has been 12-18 months work to understand the geology and get to where we are now.

SD: I would like to receive details of the logic and parameters behind why other locations above Simpson Mains were not considered suitable.

AL: Expressed the opinion the question had been answered but would take it on notice.

DS: Can you clarify the weekday shift changes?

AL: 6am – 3pm / 2pm – 11pm / 10pm – 7am. Weekends are 6am – 6pm

Light pollution:

BD: What will the light be around the site?

GA: the light gets reflected downwards. It is designed to minimize light spill.

AL: This was addressed in the subsequent submissions report. We will minimize light spill. We are working on a design to address safety and light spill.

10 ENVIRONMENT UPDATE

Nepean River Gas Zones

- 10 gas zones active- 9 at the AA9 end of river and one at the AA7 end.
- Previous period 11 gas zones active 10 at AA9 end, 1 near LW705

Environmental Water Project Update

Permanent Plant

- Concrete pavement and plinths nearing completion.
- Underdrain works nearing completion.
- Pipework racks complete with pipe installation nearing completion.
- Brine tank, permeate tank and feed water tank complete.
- Concrete backwash tank being formed.
- Motor Control Centre (MCC) and Programmable Logic Control (PLC) installation and terminations have commenced.
- Delays of up to three months for the delivery of major electrical components have been experienced due to COVID supply constraints for manufacture and transport. These delays will impact the completion of construction and the commissioning period.

Temporary Plant

• The volumes of permeate to Brennans Creek since commissioning is 62.856 ML.

Brennans Creek Dam

- Discharge continues (approximately 0.5 ML/day) with some dilution from the WTP.
- BCD discharge current EC is 1.55 mS/cm, pH 8.6.
- Dam level is currently at 9.9 metres.

Aquatic Health Monitoring

- Aquatic Health Assessment undertaken in October. CSIRO report will be available in March 2022.
- Results received from samples collected in September 2021. No Platypus or Macquarie Perch DNA present.

Georges River Remediation Plan

- Site investigations and characterisation has been undertaken at WC21, including mapping of sediment depth to bedrock, tracer injection and downstream monitoring, and drilling of the prerehabilitation fracture characterisation borehole sites.
 - Property access is still being sought for the Georges River.

Annual Review

• Annual Review was submitted and is available on the South32 website. – if the CCC does have any questions please ask.

Heritage Management Plan

- Comments have been received from consultation and management plan has been submitted for approval.
- •

Personnel

• Simon Pigozzo's last day was Friday.

11 COMMUNITY COMPLAINTS

- KS advised there had been no community complaints received since the last meeting.
- Complaints were trending downwards, which was a good outcome

12 EXPLORATION/APPROVALS UPDATE

- Currently operating 4 x drill rigs
- Located all within EL8972
- Drilling to continue around Mount Hunter, Cawdor, and Razorback

SD: What is the red dot to the east at Carrolls Road

AL: A current drilling location.

Discussion around why drilling in this location. AL explained the rationale behind borehole locations being used to define broadscale geology. Where we are drilling, does not equate to where we will mine in the future.

13 GENERAL BUSINESS

Terms of Reference

MA advised the final document was sent 17 September and that no comments had been received

SD advised that he hadn't looked at it and asked that it could be put off until the January meeting.

AL advised that IMC would like to see a conclusion.

MA stated that the matter could be considered approved and finalised. He requested IMC to tidy up of the logo on the front page, then circulate the document again.

BD requested photos of **old growth trees** on S32 on 1029 Menangle Road, with additional fencing.. AL will distribute prior to the next meeting.

Christmas dinner to be held 1 December. Please put it in your diaries

MM: When will the road at Spaniards Hill be repaired?

DS: There is 1-1.5 uplift, now subsidence west of Spaniards Hill/Douglas Park Drive.

AL: We are working with council. They determine the timeframes and don't always advise us until just before they start work.

SD: Will V6 be turned off to become a downshaft when AMVAP is completed?

AL: VS6 will maintain operations continuously through the life of the mine at some capacity.

GA: Coal handling goes back to Appin east/north and needs to be ventilated

SD: Test blasting is being considered. What approvals does South32 consider necessary? Not council. DPIE are indicating you shouldn't go ahead until after you get approval.

AL: We have been engaging council, the Department, Safe Work NSW and the Resource Regulator. The data from blasting will support our modelling. There was some initial confusion re the approval. We will obtain the appropriate approvals prior to commencing the trials.

SD: Community members I am aware of say that in their view test blasting should not occur until after approval for the project is received.

MM: I am also aware of community concerns

DS: Once 709, 710A&B are completed, 711 is past Douglas Mains. Shouldn't V6 be dialled back as you won't have people going down that access.

GA: We will take that on notice and look into that

Next Meeting: 25 January 2022 at 4pm. Location to be confirmed

SD asked if the MAP will be invited, or whether that will be the February meeting. AL put it to the CCC for preference -response that we will work on the 25th January as potential combined meeting.

Thanks were given to the RFS for providing the location for the community sessions.

14 QUESTIONS ON NOTICE & ACTIONS

Action: AL to provide Questions on Notice tracker to the Committee members prior to each meeting.

SD asked that we clear up the matter of funding – where is it coming from and how much is it? [Answer: The \$10,000 donation to Menangle Hall is coming from IMC. The September minutes of the CPP read "Other funding sources are under investigation by the Association which may result in CPP funding not being required. To be removed from future agendas."

Action: DS asked for an A3 hard copy of the mine overview plan to be mailed to him. [KS mailed on 10 November]

SD would like an answer from South32 that there will be no coal loading at the AMVA Project location.

SD would like to receive details of the logic and parameters behind why other locations above Simpson Mains were not considered suitable.

BD requested photos of the old growth trees on S32 on 1029 Menangle Road. AL will distribute prior to the next meeting.

DS Whether ventilation from VS6 will be dialled back as a result of the AMVA Project.

15 CLOSE OF MEETING

Close of meeting at 5.57pm. Next meeting Tuesday 25 January 2022 at 4pm. Location to be advised.

APPENDIX

30/10/21

Hi all

I would like the September 2020 minutes to be revised to add the statement...

"SD recommended the name of the project be revised to replace the word Appin with the word Menangle to reflect the location of the project and to improve community engagement."

Let me explain...

South32's response to submissions regarding their proposed Menangle project is now on the major projects website...

https://www.planningportal.nsw.gov.au/major-projects/project/40511

There are a number of areas of concern, however the name of the project (Appin rather than Menangle) is one that I believe directly and incorrectly references the CCC and the record should be corrected. This is a significant issue.

Within South32's response to DPIE the following is stated on p16,17...

6.2.3.2 Project title

The current title of the Project (Appin Mine Ventilation and Access Project) was amended from the original title (Appin Ventilation and Mine Access Project) in response to community feedback during the initial stages of consultation. The Project title reflects the relationship of the Project with the Appin Mine.

The ICCC were briefed on the Project in September 2020. The briefing included confirmation of the proposed location of the Project. The collateral for the planned community mailout, Project Update One (refer to Attachment 3 of the Modification Report), was presented at the meeting. The ICCC noted that 'the name of the project should be Appin Mine Ventilation and Access Project, rather than Appin Ventilation and Mine Access Project. The latter could be perceived as the project being in the Appin area'.

Response to submissions 16

IMC accepted this feedback and altered the name of the Project in all future communications, noting that it was too late to change Project Update One. Minutes from the September 2020 ICCC meeting can be found on the IMC website!

This is incorrect. Our discussion recommended changing the word Appin to Menangle, as obviously the project is located in Menangle and use of the word Appin was misleading.

https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents

Appin Mine Ventilation and Access Project

Proposed project

- AB updated the committee on proposed ventilation shafts and mine access in Menangle following a recent review of the Appin Mine Plan.
- The review determined one downcast ventilation shaft (draws air into the mine) and one upcast ventilation shaft (draws air out of the mine) is required by 2025 to support the mine.
- The proposed shafts would be known as Ventilation Shaft No. 7 and Ventilation Shaft No. 8 respectively. Mine access and associated facilities are also proposed for the site. Collectively the project is known as the Appin Mine Ventilation and Access Project. No coal handling facilities are included in the project.
- . The proposed location is 345 Menangle Road, Menangle near the intersection of Finns and

Menangle Roads. This location is determined by the ventilation requirements for the mine and the layout of the approved Appin Mine underground workings. It is also determined by features on the surface such as cultural, environmental, community infrastructure and availability of suitable land.

- CCC reviewed the project update collateral presented at the meeting and noted:
 - o the name of the project should be Appin Mine Ventilation and Access Project, rather than Appin Ventilation and Mine Access Project. The latter could be perceived as the project being in the Appin area. AB accepted this feedback and would alter the name of the project in future communications, however it was too late to alter the information due to be distributed later in the week.
 - Scales should be included on all future maps made public to assist with distance from residential areas
 - A new map of location should be provided on the collateral as the current one is not a true reflection of where the shafts will be located. AB accepted the feedback and explained the map of the area was inset and the area described fell within the property boundary. The feedback will be noted, however, also too late to amend current collateral.
- CCC discussed the proposed location distance from Menangle. AB advised it was about 1.1km from the northern tip of the property to the outskirts of the town, being Durham Green retirement village.
- PC questioned if the Government Cumberland Plain proposal impacted on the project. The detail was not available at the meeting but would be taken as a Question on Notice.
- SD asked if the M9 Orbital would be going through this same area. AB advised that the M9
 was yet to be gazetted and the Department of Transport NSW would have an opportunity
 to provide feedback through the Modification Approval process.

Conceptual layout

I recall Amanda, in the meeting, advised the information brochures had been printed and distribution was underway, hence difficult to change, and I do not dispute she agreed to add the word "Mine" to the name.

However, the minutes do not reflect the full discussion. My recollection is that the community representatives recommended the name was changed to replace the word Appin with the word Menangle. I think it was most or all community reps that agreed but likely Danny (DS) and I (SD), in particular that commented, but happy to just have myself quoted.

I recall noting this issue when reviewing the minutes just prior to their acceptance. Sadly, this is not recorded.

I repeat, I would like the September 2020 minutes to be revised to add the statement...

"SD recommended the name of the project be revised to replace the word Appin with the word Menangle to reflect the location of the project and to improve community engagement."

Regards

Sam