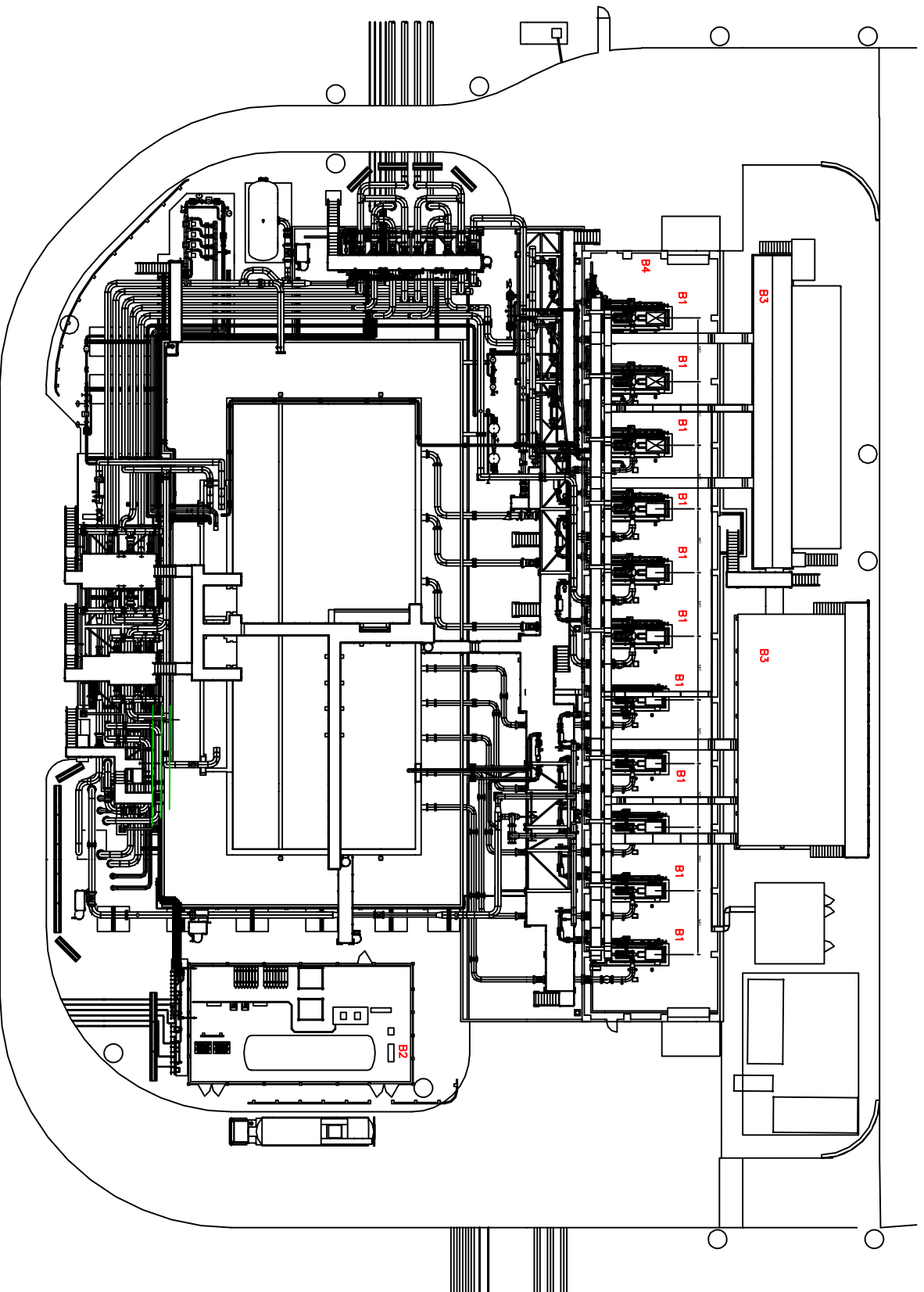


Annex B

Operational Noise Information

Noise modelling for the GPP and the SMC have been based on the operational noise levels shown in the graphics which follow in this *Annex*. The data have been supplied by Ineos, and the noise levels shown represent unmitigated noise levels from equipment in the open. The assumption has been made that all equipment can be enclosed in a building, except the fans cannot be enclosed within a building when the mitigated scenario has been modelled. No data were available for the substation, but it is assumed that this will be designed to an appropriately low level so that it does not result in significant noise impacts.

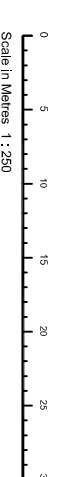
For the Whitley Pumping Station the assumption has been made that there will be two pumps (each with sound power values of 88 dB(A)) and two fans (each with a sound power of 88 dB(A)). These values have been provided by Ineos based on its experience of similar plant for the unmitigated case. For the mitigated noise modelling the fan size requirements were reviewed based on experience of an existing pump house on the brinefield. This suggested the noise level would not exceed 65 dB(A) at 1 m which is equivalent to a sound power of approximately 72 dB(A).



PLAN ON SOLUTION MINING COMPOUND

HOLFORD BRINEFIELD - KEUPER GAS STORAGE PROJECT - PLAN ON SOLUTION MINING COMPOUND G1.

DEFINITION OF NOISE SOURCES SCHEDULE				
SOURCE	SOURCE DESCRIPTION	COOP ITEM	SOUND POWER LEVEL PER SOURCE dB(A)	COMMENT
B1	BRINE AND WATER PUMPS	P901	94	PUMPHOUSE
B1	WEAK BRINE PUMPS	P902	94	PUMPHOUSE
B2	NITROGEN PUMPS	W901	94	POINT SOURCE
B3	VSD ROOM VENTILATION COOLER FANS	VSD	88	FANS ON VSD BUILDING
B4	PUMPHOUSE FANS	PUMP HOUSE	88	FANS ON PUMPHOUSE BUILDING



TITLE		HOLFORD BRINEFIELD - KEUPER GAS STORAGE PROJECT - PLAN ON SOLUTION MINING COMPOUND G1.		PROJECT No.		13-03-01/HOL/60/1004	
P2	DEVELOPMENT DRAWING - (NOISE SOURCE SCHEDULE ADDED)	AC	02/07/2013	APPROVED BY	DATE	31/07/2013	1:250
P1	DEVELOPMENT DRAWING	AC	02/07/2013	WORKS	PLANT	SECTIONS	A1
REV	ALTERATIONS	CHKD	DATE	EXT.	DATE	2013	P2

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HOLFORD BRINEFIELD, LOSTOCK GRAHAM,
NORTHWICH, CHESHIRE, CW9 7TD.

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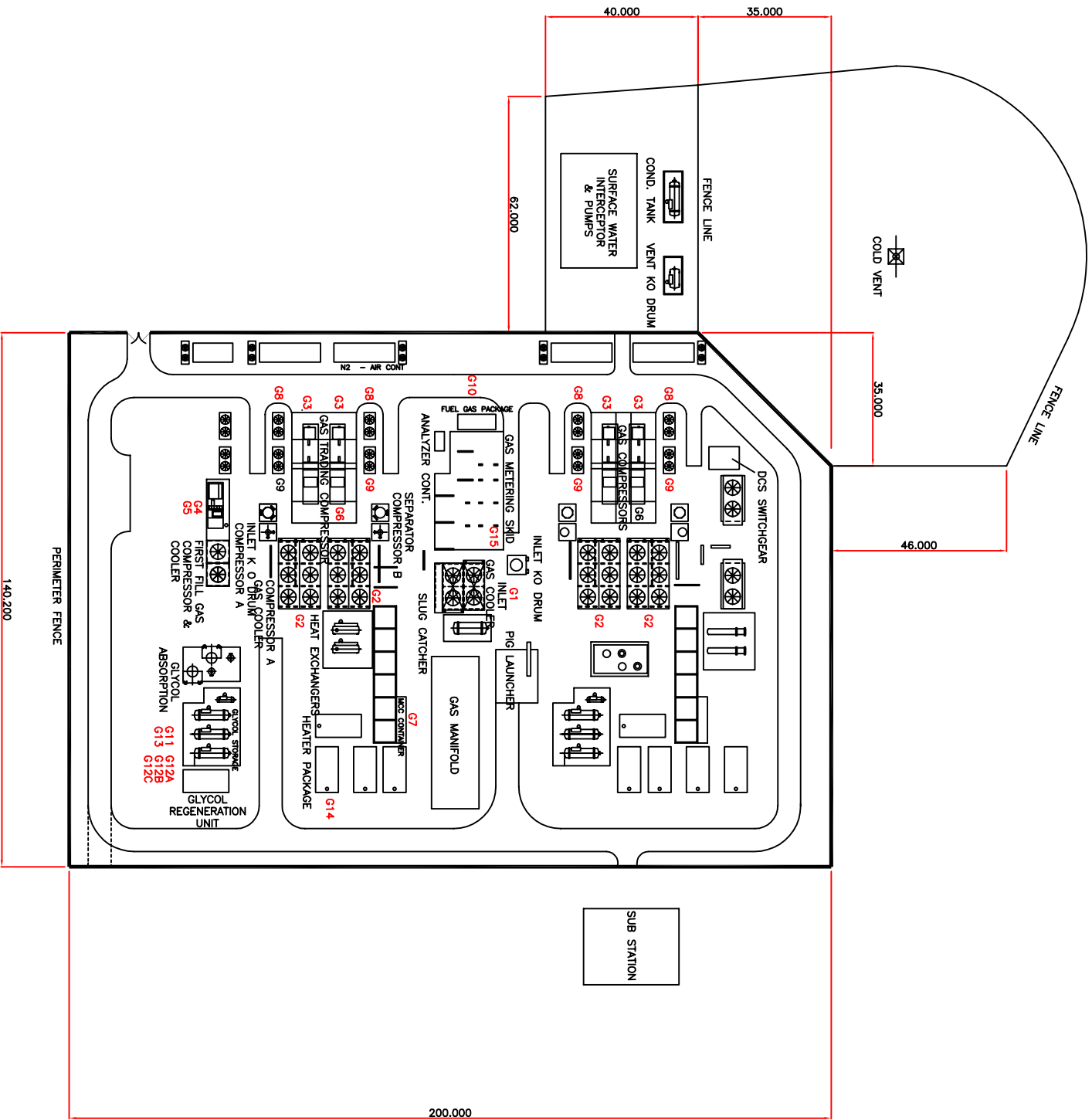
DRAWN BY: Alan Copper
CHECKED BY: DP
DATE: 31/07/2013
DATE: 02/07/2013

APPROVED BY: [Signature]
DATE: 31/07/2013

PROJECT No. 13-03-01/HOL/60/1004

SCALE 1:250

SIZE A1



DEFINITION OF NOISE SOURCES SCHEDULE						
SOURCE	SOURCE DESCRIPTION	OSQP ITEM	SOUND POWER LEVEL PER SOURCE, dB(A)	NUMBER	COMMENT	
G1	INLET GAS COOLER FAN	EZ21	88	2	POINT SOURCE	
G2	COMPRESSOR AFTERCOOLER FAN	E201	88	2	POINT SOURCE	
G3	COMPRESSOR	K201	88	2	N COMPRESSOR HOUSE	
G4	FG COMPRESSOR FAN		93	2	POINT SOURCE	
G5	FG COMPRESSOR FAN	K201	93	1	POINT SOURCE	
G6	COMPRESSOR BUILDING VENTILATION FANS		88	3	POINT SOURCE ON ROOF OF COMPRESSOR BUILDING	
G7	COMPRESSOR VSD COOLER FAN		97	4	N MCC CONTAINER	
G8	COMPRESSOR MOTOR COOLERS		88	4	POINT SOURCE	
G9	COMPRESSOR OIL COOLERS		83	1	POINT SOURCE	
G10	FUE GAS SHD CONTROL		78	1	POINT SOURCE	
G11	DEGENERATION UNIT BACK PRESSURE CONTROL VALVE	PO301	78	2	POINT SOURCE	
G12A	O/HEAD VAPOUR COMBUSTOR	H311	63	2	POINT SOURCE ON GLYCOL PLANT	
G12B	COMBUSTION AIR FAN	E311	78	2	AS ABOVE	
G12C	FUE GAS FAN	F312	78	2	AS ABOVE	
G13	TFC COOLERS	E111	88	2	POINT SOURCE	
G14	HEATING MEDIUM POINT	P411	73	2	POINT SOURCE	
G15	PRESSURE REDUCTION VALVE	PO401	78	2	POINT SOURCE	

PLAN ON GAS PROCESSING PLANT

HOLFORD BRINEFIELD - KEUPER GAS STORAGE PROJECT - GAS PROCESSING PLANT LAYOUT



REV		DATE	BY	CHKD	DATE	DESCRIPTION
P4	DEVELOPMENT DRAWING - NOISE SOURCE SCHEDULE ADDED	02/07/2013	AC			
P3	DEVELOPMENT DRAWING - PLANT LAYOUT REVISED	10/06/2014	AC			
P2	PRELIMINARY ISSUE (REDRAWN)	25/11/2013	AC			
P1	DEVELOPMENT DRAWING	30/13/2013	AC			
REV	ALTERATIONS					
<p>KEUPER GAS STORAGE LIMITED BRINE AND WATER SECTION, NORTHWICH SITES, HOLFORD BRINEFIELD, LOSTOCK GRAHAM, NORTHWICH, CHESHIRE, CW9 7TD.</p>						
<p>WARNING THIS DRAWING HAS BEEN GENERATED USING C.A.D. AUTHORIZED COPYING AND MICROFILMING IS PERMITTED BUT UNDER NO CIRCUMSTANCES SHOULD REVISIONS BE MADE TO THE DRAWING EXCEPT BY UPDATING THE C.A.D. MASTER IMAGE. IF ANY DOUBT EXISTS PLEASE CONTACT HOLFORD DRAWING OFFICE FOR CONFIRMATION OF CURRENT DRAWING STATUS</p>						
DATE		24.06.2013	APPROVED BY		PROJECT No. 13-03-01/HOL/60/1003	
DRAWN BY		Alan Capper	ACC. No.		SCALE 1:750	
CHECKED BY		DP	WORKS		SYSTEM	
DATE		24.06.2013	PLANT No.		SECTION(S)	
TITLE		HOLFORD BRINEFIELD - KEUPER GAS STORAGE PROJECT - GAS PROCESSING PLANT LAYOUT				
EXT.		DRAWING No. 13-03-01/HOL/60/1003				
REV		P4				