

**ASHFORD SC**

**ASHFORD IECC A**

**EXTERNAL COMMUNICATIONS SUBSYSTEM  
SPECIFICATION**

**10A/DC/SPE/ECS**


**VERSION UX1**

**Controlled Copy No.**

## **ISSUE and AMENDMENT RECORD**

<b>Version</b>	<b>Produced</b>	<b>Checked</b>	<b>Date</b>	<b>Details of change</b>
UP1	■	■	26/10/12	Initial issue of document.
UP2	■	■	16/11/12	Updated for Ashford Life Extension project. Changes have made to correct design anomalies in response to Data Prep Set-to-Work comments and removal of redundant DIP cards from both RILs (sections 2.1, 4.4, 6.3, 8.3, 9.4, 10.4)
UP3	■	■	08/01/13	Issue produced to incorporate design modification ALE/MOD/030. (Amended sections 3.4, 6.4, 7.4, 8.4)
UP4	■	■	11/01/13	Changes have made to rationalise the signalling items transmitted to FET1 link in response to response to test log (1226-ALE-TEC-TST-TCP-01(A) – 0055) and also updated to revised Stage 1 scope. (Amended sections 1.2, 2.1, 2.2, 2.5.1 4.1, 4.2, 4.3, 4.4, 5.1, 5.2, 5.3, 6.3, 8.3)
UP5	■	■	27/02/13	Updated to incorporate design modifications ALE/MOD/044 and 066. Affects sections 2.5.2, 3.4, 4.4, 5.4, 7.4, 9.4 and 10.4.
UW1	■	■	15/03/13	Updates in line with stage 3 of the ALE scheme and re-instatement of pre-announce berths for RCCS purposes.
UW2	■	■	24/04/13	Updated to incorporate design modification ALE/ST3/MOD/001. Affects sections 3.4, 6.4, 7.4 and 8.4.
UX1	■	■	25/04/13	ALE stage 4 amendments – Removal of berth V174 and routes RV176A & RV176B. (Amended sections 2.1, 2.2, 2.4.2, 2.5.1, 3.4, 4.3, 4.4, 6.3, 7.4, 8.3, 9.4, 10.4)

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DELTARAIL GROUP LTD	Name	Signature	Date
Produced			29/07/2013
Checked			15/8/2013

This document has been accepted, on behalf of Network Rail, by:

Print name	Signature	Date

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# 1 INTRODUCTION

## 1.1 Document Overview

This document defines the External Communications Subsystem (ECS) data requirements for the Ashford Integrated Electronic Control Centre (IECC) A located at Ashford Signalling Centre (SC).

The following information is supplied for each ECS link:

- Link Characteristics
- Train Descriptor (TD) berths transmitted and received
- Signalling items transmitted and received (where appropriate)
- Subsystems which will be informed of changes in remote link status.

## 1.2 ABBREVIATIONS

<b>DIS</b>	Flexible Display Subsystem
<b>ECS</b>	External Communication Subsystem
<b>FET1</b>	Front End Train Descriptor 1
<b>IDPM</b>	IECC Data Preparation Manual
<b>IECC</b>	Integrated Electronic Control Centre
<b>SC</b>	Signalling Centre
<b>SMART</b>	Signal Monitoring and Reporting of Trains
<b>TD</b>	Train Descriptor

## 1.3 Related Documents

IECC Applications Manual Contents	NR/SP/SIG/10040 Issue 8
IDPM 1302 External Communications Reference	SAO-IEC-HD-56 Issue 4.1

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## 2 ECS OVERVIEW

### 2.1 All berths known to IECC

*/Workstation 1 (DIS1)*

0001	0002	0003	0004	0005	0006	0007	0008
0009	0010	0011	0012	0013	0014	0015	0016
0017	0018	0019	0020	0022	0023	0024	0025
0026	0027	0029	0030	0031	0032	0034	0035
0036	0037	0039	0041	0042	0043	0044	0046
0048	0049	0051	0053	0055	0056	0058	0059
0060	0061	0063	0065	0066	0067	0068	0069
0070	0071	0072	0073	0074	0075	0076	0077
0078	0079	0080	0081	0082	0083	0084	0085
0086	0087	0088	0089	0090	0091	0092	0093
0094	0095	0096	0097	0098	0099	0100	0102
0106	108X	0109	0111	0112	0113	0114	0116
0117	0118	0119	0120	0121	0122	0123	0124
0125	0127	0129	0325	0327	0328	0329	0330
2009	2011	2014	2018	2020	2022	2035	2037
2039	A019	A021	A023	A025	A050	A052	A054
A064	B019	B021	B023	B025	B050	B052	B054
B064	C019	C021	C023	C025	F019	F021	F023
F025	F050	F052	F054	F062	F064	F104	L326
L328	R019	R021	R022	R023	R025	R050	R052
R054	R062	R064	R104	V207	V209	V214	V216
V232	V290	V321	V324	X108	DB01	VA01	VA02
DB02	DB03	DB04	DB05	DB06	DB07	DB08	DB09
LA01	LA02	VA03	VA04	VA05	LSW2	SSW2	STA1
APDF	APDS	LSCR	LSFT	LSST	LSUB	LSUF	LSUS
SSCR	SSFT	SSST	SSUB	SSUF	SSUS	DB10	

*/Workstation 2 (DIS2)*

0126	0128	0130	0131	0132	0133	0134	0135
0136	137X	0139	0141	0143	0148	0150	0152
0154	0155	0157	0159	0160	0161	0162	0163
0164	0165	0166	0167	168X	0169	0170	0171
0172	0173	0174	0175	0176	0177	0178	0179
0180	0181	0182	183X	0184	0186	0188	0190
0197	0199	200X	201X	0202	203X	0204	0205
0206	0207	0208	0209	0210	0211	0212	0213
0214	0215	0216	0217	0218	0219	0221	0251
0252	0253	0400	0401	0402	0403	0404	0406
0505	0507	0509	0510	0512	0521	0523	0524
0525	0526	0527	0528	0530	0584	0586	0588
0590	0591	0592	0593	0594	0595	0596	0598
609X	2030	2032	2036	2038	2041	2059	2061
2063	2071	2073	2080	2084	2085	2086	A043
A045	A047	A049	A146	A195	B043	B045	B047
B049	B146	B195	C043	C045	C047	C049	D00Y
D101	D293	F043	F045	F047	F049	F146	F195

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R043	R045	R047	R049	R146	R195	T503	T508
X137	X200	X216	X219	X403	X588	DB11	DB12
DB13	DB14	DB15	DB16	DB17	DB18	DB19	DB20
DB21	DB22	DB23	DB24	DB25	DB26	APW4	LSW1
LSW4	SSW1	SSW4	STA2	STA3	STA4	LSDH	LSDM
LSUG	SSDH	SSDM	SSUG	A163	A170	A204	A205
A214	A215	A590					

*/Workstation 3 (DIS3)*

0891	0892	0893	0894	0895	0896	0897	0898
APW1	RY04	APWX	LSDR	LSUR	SSDR	SSUR	

*/Additional berths for London Bridge fringe*

L313	L315	L317	L319
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*/Additional berths for Victoria fringe*

F246	F250		V179	V181	V183	V185	V187
V189	V193	V195	V197	V199	V201	V203	V208
V213	V215	V218	V220	V222	V224	V226	V228
V230	V234	V335	V236	V238	V240	V242	V244
V317	V319	V337	V338				

*/Additional berths for Tonbridge fringe*

0408	0410	0415	0416	0417	0418	0422	0424
0426	0428	0430	0432				

*/Additional berths for Three Bridges fringe*

T495	T501
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*/Additional berths for Watlington fringe*

D007
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*/Additional berths for Rye*

RY25	RY27
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*/Additional berths for IECC B Workstation 4 fringe*

0602	0604	0606	0608	0610	0612	614X
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## 2.2 Berths from FET1

The following berths belong to TD Area: *FET1*

0001	0003	L321	L313	L315	L317	L319	L326
L328	APDF	APDS					
0020	0022	0035	0031	0325	F246	F250	
V179	V181	V183	V185	V187	V189	V193	V195
V197	V199	V201	V203	V207	V208	V209	V213
V214	V215	V216	V218	V220	V222	V224	V226
V228	V230	V232	V234	V236	V238	V240	V242
V244	V290	V317	V319	V321	V324	V335	
0403	0406	0408	0410	0415	0416	0417	0418
0422	0424	0426	0428	0430	0432		
0505	T495	T501	T503	T508			
0253	D007	D101	D293	D00Y			
0898	RY04	RY25	RY27				
V337	V338						

## 2.3 Berths from ECS B

The following berths belong to TD Area: ECSB

0595	0598	0602	0604	0606	0608	609X	0610
0612	614X	0891	0892	0893	X200	STA3	

## 2.4 Early Transmission and ARS Strike-in Berths

Any berth that is updated by a remote system, whose update needs to be known to ARS or any DIS, is an Early Transmission Berth. This list of berths is split into the various DIS subsystems on the IECC, as the data specifies which DIS each listed berth is sent to. The berths required by ARS (for strike-in purposes) used to be separately listed, but this is no longer done due to a code fault; now any such berth is included in the relevant DIS list (as the berths in a DIS list are sent to ARS anyway).

### 2.4.1 ARS Strike-In Berths

*Included within the Early Transmission Berths*

### 2.4.2 Early Transmission Berths - Workstation 1 (DIS1)

0001	0003	0020	0022	0035	0031	0325	L321
	F246	F250	L313	L315	L317	L319	L326
L328		V179	V181	V183	V185	V187	V189
V193	V195	V197	V199	V201	V203	V207	V208
V209	V214	V213	V215	V216	V218	V220	V222
V224	V226	V228	V230	V232	V234	V236	V238
V240	V242	V244	V290	V317	V319	V321	V324
V335	APDF	APDS					

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### 2.4.3 Early Transmission Berths - Workstation 2 (DIS2)

0253	0403	0406	0408	0505	0595	0598	609X
D007	D101	D293	D00Y	T495	T501	T503	T508
X200	STA3						

### 2.4.4 Early Transmission Berths - Workstation 3 (DIS3)

0891	0892	0893	0898	RY04	RY25
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## 2.5 Identities

### 2.5.1 FET1 identities

The following identities belong to TD Area: FET1

	SL317	SL319	SV197	SV199	SV201	SV203	SV207
SV216	SV220	SV222	SV224	SV250		SV319	SV236
RRY25	RL313A	RL313B	RL313C	RL315A	RL315B	RL317	RL319A
RL319B							
RV197	RV199A	RV199B	RV201A	RV201B	RV201C	RV203A	RV203B
RV203C	RV216A	RV216B	RV220A	RV220B	RV220C	RV222A	RV222B
RV224	RV250	RV290	RV319	RV321A	RV321B		

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## 3 ECS INTER-UNIT LINK (1)

### 3.1 Overview

This ECS-ECS remote system link operates from port 1. It is a link to the Master/Standby computer unit with **TD** type initialisation.

### 3.2 Link Characteristics

LINK CHARACTERISTICS			
Port(s)	1	Baud Rate	19200
Physical Name	P1	Time-Out Period (secs)	1
Area	ILA1	Message Retry Count	8
Protocol	BR1810	Message Retry Field Flag	Set

### 3.3 Berths

Changes in the contents of **ALL** berths known to the IECC will be transmitted by the Master ECS computer unit to the Standby ECS computer unit and vice-versa.

### 3.4 Signalling items

Changes on the status of the following signalling items will be transmitted by the Master ECS unit to the Standby ECS unit and vice-versa.

*/Address 00-0F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R13	R14	R15	R16	R17A	R17B	R19A	R19B
R19C	R20	R22A	R22B	R23A	R23B	R31	R34A
R24	R25	R26A	R26B	R27	R28	R29	R30
R34B	R34C	R35	R36A	R36B	R41A	R41B	R43
R46	R48A	R48B	R49M	R49W	R50AM	R50BS	R50CS
R50ES	R50DS	R51	R52AM	R52B1M	R52B2M	R52B3M	R52C1S
R52C2S	R52DS	R52ES	R52FS	R53AM	R53AC	R53B1M	R53B1C
R53B2M	R53B2C	R53CM	R53CC	R53DM	R53DW	R53DC	R53EM
R53EW	R53EC	R54AM	R54B1M	R54B2M	R54CS	R54DS	R54ES
R54FS	R55AM	R55AC	R55BM	R55BC	R55CM	R55CW	R55CC
R55DM	R55DW	R55DC	R55EM	R55EW	R55EC	R55FM	R55FC
R56AM	R56B1M	R56B2M	R56CS	R56DS	R56ES	R56FS	R58A
R58B	R59	R60	R61	R62	R63	R64	R66AM
R66AW	R66AC	R66BM	R66BC	R66CM	R66CC	R66DM	R66DC
R2009A	R2009B	R2009C	R2009D	R2009E	R2009F	R2011A	R2011B1
R2011B2	R2011B3	R2011C1	R2011C2	R2011D1	R2011D2	R2011E	R2014A

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*/Address 10-1F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R2014B	R2014C	R2019A	R2019B	R2019C	R2019D	R2021A	R2021B
R2021C	R2021D	R2023A	R2023B	R2023C	R2023D	R2025A	R2025B1
R2025B2	R2025C	R2025D	R97	R98	R99AM	R99AW	R99AC
R99BM	R99BC	R99CM	R99CC	R100A	R100B	R102	R104
R106AM	R106AW	R106AC	R106BM	R106BC	R106CM	R106CC	R108XAM
R108XAC	R108XBM	R108XBC	R108XCM	R108XCC	R109AS	R109BS	R109CM
R111AS	R111BM	R111CM	R113A	R113B	-	R329AM	R329AW
R329AC	R329BM	R329BC	R325	R2018	R2020	R2022A	R2022B
R2022C	R2035A	R2035B	R2035C	R2037A	R2037B	R2039	R132A
R132B	R134A	R134B	R135AM	R135BM	R135BW	R135CM	R135CW
R136A	R136B	R137XAM	R137XBM	R137XBW	R137XCM	R137XCW	R139AM
R139BM	R139BW	R141	R143AM	R143AW	R143BM	R146AM	R146BS
R148AM	R148BS	R150AM	R150BM	R150CS	R150DS	R150ES	R150FS
R150GS	R150HM	R152AM	R152BM	R152CS	R152DS	R152ES	R152FS
R152GS	R152HM	R154AM	R154BM	R154CS	R154DS	R154ES	R154FS
R154GS	R154HM	R523AM	R523BM	R523BW	R523BC	R523CM	R523CC

*/Address 20-2F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R525AM	R525BM	R525BC	R525BW	R525CM	R525CC	R527AM	R527AC
R527AW	R527BM	R527BC	R2030A	R2030B	R2030C	R2030D	R2030E
R2030F	R2030G	R2043	R2045	R2047	R2049	R2059A	R2059B
R2059C	R2061	R2063A	R2063B	R155AM	R155AW	R155BM	R155CM
R157AM	R157AW	R157BM	R157CM	R159A1M	R159A2M	R159B1M	R159B2M
R159CS	R159DM	R160AM	R160AC	R160AW	R160B1M	R160B1C	R160B1W
R160B2M	R160B2C	R160B2W	R160CM	R160CW	R160DS	R160EM	R160EC
R161AM	R161BM	R161CS	R161DM	R162AM	R162AC	R162AW	R162B1M
R162B1C	R162B1W	R162B2M	R162B2C	R162B2W	R162CM	R162CW	R163AS
R163BM	R164AM	R164AC	R164AW	R164B1M	R164B1C	R164B1W	R164B2M
R164B2C	R164B2W	R164CM	R164CW	R165AS	R165BM	R166AM	R166BS
R167	R168XAM	R168XBS	R168XCS	R170AM	R170AW	R170BM	R400AM
R400AC	R400AW	R400BM	R400BC	R400BW	R400CM	R400CW	R401
R402	R2032A	R2032B	R2036A	R2036B	R2038A	R2038B	R2038C
R2038D	R2038E	R181A	R181B	R181C	R181D	R183XA	R183XB
R183XC	R183XD	R184AM	R184BM	R184CS	R186AM	R186BM	R186CS

*/Address 30-3F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R188A	R188B	R190A	R190B	R195	R197A	R197B	R199
R200XA	R200XB	R201X	R202A	R202B	R203XAM	R203XBS	R251A
R251B	R252	R253	R2071A	R2071B	R2071C	R2071D	R2073A
R2073B	R2080A	R2080B	R2081	R2084A	R2084B	R2085	R2086A
R2086B	R2086C	R521AS	R521BM	R521BW	R521CM	R521CW	R526

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<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R528	R530	R2041A	R2041B	R2041C	-	-	R810
-	-	R893	R894	R895	R896	R897A	R897B
R898	S13	S14	S15	S16	S17	S19	S20
S22	S23	S24	S25	S26	S27	S29	S30
S31	S34	S35	S36	S41	S43	S46	S48
S49	S50	S51	S52	S53	S54	S55	S56
S58	S59	S60	S61	S62	S63	S64	S66
S2009	S2011	S2019	S2021	S2023	S2025	S2014	S97
S98	S99	S100	S102	S104	S106	S108X	S109
S111	S113	S329	S325	S2018	S2020	S2022	S2035
S2037	S2039	S132	S134	S135	S136	S137X	S139

*/Address 40-4F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
S141	S143	S146	S148	S150	S152	S154	S523
S525	S527	S2030	S2043	S2045	S2047	S2049	S2059
S2061	S2063	S155	S157	S159	S161	S160	S162
S164	S163	S165	S166	S167	S168X	S170	S400
S402	S401	S2032	S2036	S2038	S181	S183X	S184
S186	S188	S190	S195	S197	S199	S200X	S201X
S203X	S202	S251	S2071	S2073	S2080	S2081	S2084
S2085	S2086	S530	S521	S526	S528	S2041	S895
S896	S897	S898	S252	S253	S893	S894	S1
S2	S3	S4	S5	S6	S7	S8	S9
S10	S11	S32	S37	S39	S42	S44	S65
S67	S68	S69	S70	S71	S72	S73	S74
S75	S76	S77	S78	S79	S80	S81	S82
S83	S84	S85	S86	S87	S88	S89	S90
S91	S92	S93	S94	S95	S96	S112	S114
S116	S117	S118	S119	S120	S121	S122	S123

*/Address 50-5F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
S124	S125	S127	S129	S327	S328	S330	S126
S128	S130	S131	S133	S169	S171	S172	S174
-	S173	S175	S176	S177	S178	S179	S180
S182	-	-	-	-	S524	S204	S205
S206	S207	S208	S209	S210	S211	S212	S213
S214	S215	S216	S217	S218	S219	S221	S584
S586	S588	S590	S591	S592	S593	S594	S596
S598	-	-	-	-	-	-	-
L50TRS	L52TRS	L54TRS	L56TRS	L58TRS	L60TRS	L62TRS	L59TRS
L61TRS	L63TRS	L64TRS	L2019TRS	L2021TRS	L2023TRS	L2025TRS	L98TRS
L100TRS	L102TRS	L104TRS	L109TRS	L111TRS	L113TRS	L2043TRS	L2045TRS
L2047TRS	L2049TRS	L146TRS	L148TRS	L152TRS	L154TRS	L155TRS	L159TRS
L161TRS	L184TRS	L190TRS	L195TRS	L197TRS	L203XTRS	LKYLDTRS	-

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
TOV	TPDW	TPLP	-	-	-	-	-
-	SL317	SL319	SV197	SV199	SV201	SV203	SV207
SV216	SV220	SV222	SV224	SV250	-	SV319	SV236

/Address 60-64

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
RRY25	RL313A	RL313B	RL313C	RL315A	RL315B	RL317	RL319A
RL319B	-	-	-	-	-	-	-
RV197	RV199A	RV199B	RV201A	RV201B	RV201C	RV203A	RV203B
RV203C	RV216A	RV216B	RV220A	RV220B	RV220C	RV222A	RV222B
RV224	RV250	RV290	RV319	RV321A	RV321B	-	-

### 3.5 Link Status

Changes in the status of the remote links will be sent to DIS1, DIS2 and DIS3.

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 4 ECS LINK TO FET1

### 4.1 Overview

This ECS remote system link operates from port 2. It is a link to FET1 with **TD** type initialisation.

### 4.2 Link Characteristics

LINK CHARACTERISTICS			
Port(s)	2	Baud Rate	9600
Physical Name	P2	Time-Out Period (secs)	2
Area	FET1	Message Retry Count	3
Protocol	BR1810	Message Retry Field Flag	Set

### 4.3 Berths

Changes in the contents of the following berths will be transmitted by ECS to the FET1:

0001	0002	0003	0004	0006	0008	0010	0012
0014	0016	0018	0020	0022	0024	0026	0030
0032	L326	L328					
0005	0007	0009	0011	0013	0015	0017	0019
0023	0025	0027	0029	0031	0034	0035	0036
0037	0039	0041	0042	0043	0044	0046	0048
0058	0061	0066	0068	0098	0100	0106	108X
0109	0111	0325	0328	0330	F062	R062	V209
V214	V232	V324					
0505	0510	0512	0524	T508			
0125	0127	0129	0131	0133	0135	137X	0141
0143	0150	0152	0154	0157	0159	0160	0161
0162	0163	0164	0166	168X	0170	0172	0174
0176	0178	0400	0401	0402	0507	0509	0521
0523	0525	0526	0530	2059	2061		
0403	0404	0406					
0197	0252	0253	2085	D101	F195		
0891	0893	0895	0897	0898	RY04		
0155	0892	0894	0896				
0049	0051	0053	0055	0056	0059	0060	0063
0065	0067	0069	0070	0071	0072	0073	0074
0075	0076	0077	0078	0079	0080	0081	0082
0083	0084	0085	0086	0087	0088	0089	0090
0091	0092	0093	0094	0095	0096	0097	0099
0102	0112	0113	0114	0116	0117	0118	0119
0120	0121	0122	0123	0124	0126	0128	0130
0132	0134	0136	0139	0148	0165	0167	0169
0171	0173	0175	0177	0179	0180	0181	0182
183X	0184	0186	0188	0190	0199	200X	201X
0202	203X	0204	0205	0206	0207	0208	0209
0210	0211	0212	0213	0214	0215	0216	0217

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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0218	0219	0221	0251	0327	0329	0527	0528
0584	0586	0588	0590	0591	0592	0593	0594
0595	0596	0598	609X	2009	2011	2014	2018
2020	2022	2035	2037	2039	2030	2032	2036
2038	2041	2063	2071	2073	2080	2084	2086
A019	A021	A023	A025	A043	A045	A047	A049
A050	A052	A054	A064	A146	A195	B019	B021
B023	B025	B043	B045	B047	B049	B050	B052
B054	B064	B146	B195	C019	C021	C023	C025
C043	C045	C047	C049	F104	R019	R021	R022
R023	R025	R043	R045	R047	R049	R050	R052
R054	R064	R104	R146	R195	X108	X137	X200
X216	X219	X403	X588				

Changes in the contents of the following berths will be received by ECS from the FET1:

0001	0003	L321	L313	L315	L317	L319	L326
L328	APDF	APDS					
0020	0022	0035	0031	0325	F246	F250	
V179	V181	V183	V185	V187	V189	V193	V195
V197	V199	V201	V203	V207	V208	V209	V213
V214	V215	V216	V218	V220	V222	V224	V226
V228	V230	V232	V234	V236	V238	V240	V242
V244	V290	V317	V319	V321	V324	V335	
0403	0406	0408	0410	0415	0416	0417	0418
0422	0424	0426	0428	0430	0432		
0505	T495	T501	T503	T508			
0253	D007	D101	D293	D00Y			
0898	RY04	RY25	RY27				
V337	V338						

Berths that do not follow this standard are listed below with the value on the right within the brackets being the received identity.

{0001	A001}
{0003	A003}
{0031	A031}
{0035	A035}
{0020	A020}
{0022	A022}
{0325	A325}
{0505	A505}

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 4.4 Signalling Items

Changes on the status of the following signalling items will be transmitted by the ECS to the FET1:

/Address 00-09

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R13	R14	R15	R16	R17A	R19A	R20	R22A
R22B	R24	R28	R26A	R26B	R30	R34A	R34B
R34C	R36A	R36B	R46	R48A	R48B	R50AM	R52AM
R52B1M	R52B2M	R52B3M	R54AM	R54B1M	R54B2M	R56AM	R56B1M
R56B2M	R58A	R58B	R60	R62	R64	R66AM	R66AW
R66AC	R66BM	R66BC	R66CM	R66CC	R66DM	R66DC	R98
R100A	R100B	R106AM	R106AW	R106AC	R106BM	R106BC	R106CM
R106CC	R108XAM	R108XAC	R108XBM	R108XBC	R108XCM	R108XCC	R195
R197A	R895	R897A	R897B	R898	R896	R2085	R2086A
R2086B	R2086C	TOV	TPDW	TPLP	-	-	-

Changes on the status of the following signalling items will be received by the ECS from the FET1:

/Address 00-06

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
-	SL317	SL319	SV197	SV199	SV201	SV203	SV207
SV216	SV220	SV222	SV224	SV250	-	SV319	SV236
RRY25	RL313A	RL313B	RL313C	RL315A	RL315B	RL317	RL319A
RL319B	-	-	-	-	-	-	-
RV197	RV199A	RV199B	RV201A	RV201B	RV201C	RV203A	RV203B
RV203C	RV216A	RV216B	RV220A	RV220B	RV220C	RV222A	RV222B
RV224	RV250	RV290	RV319	RV321A	RV321B	-	-

Note: As IECC A ECS is only connected to FET1, this design is based upon the assumption that any information required being either received from or transmitted to external systems connected to FET3 or FET2, the processing will be undertaken by FET1.

## 4.5 Link Status

Changes in the status of remote links will be sent to DIS1, DIS2 and DIS3.

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 5 ECS LINK TO IECC B (2) ECS

### 5.1 Overview

This ECS remote system link operates from port 8. It is a link to IECC B (2) ECS with **TD** type initialisation.

### 5.2 Link Characteristics

LINK CHARACTERISTICS			
Port(s)	8	Baud Rate	9600
Physical Name	P8	Time-Out Period (secs)	2
Area	ECSB	Message Retry Count	3
Protocol	BR1810	Message Retry Field Flag	Set

### 5.3 Berths

Changes in the contents of the following berths will be transmitted by ECS to the IECC B (2) ECS:

0197	0199	201X	203X	0205	0207	0209	0211
0213	0215	0217	0219	0221	0591	0593	0595
0598	609X	0892	0893	0894	0896	0898	X200
APW4	STA4	V319	V321	V335	V337	V338	X216
X588	A163	A170	A204	A205	A214	A215	A590

Changes in the contents of the following berths will be received by ECS from the IECC B (2) ECS:

0595	0598	0602	0604	0606	0608	609X	0610
0612	614X	0891	0892	0893	X200	STA3	V338

### 5.4 Signalling Items

Changes on the status of the following signalling items will be transmitted by the ECS to the IECC B (2) ECS:

*/Address 00*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
RV319	RV321A	-	-	-	-	-	-

Changes on the status of the following signalling items will be received by the ECS from the IECC B (2) ECS:

*None*

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 5.5 Link Status

Changes in the status of remote links will be sent to DIS1, DIS2 and DIS3.

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 6 ECS LINK TO SMART PC LINK 1

### 6.1 Overview

This ECS remote system link operates from port 6. It is a link to SMART PC Link 1 with **ETB** type initialisation.

### 6.2 Link Characteristics

LINK CHARACTERISTICS			
Port(s)	6	Time-Out Period (secs)	2
Physical Name	P6	Message Retry Count	3
Area	SMT1	Message Retry Field Flag	Set
Protocol	BR1810	Incoming Message Header	ASA202
Baud Rate	9600	Outgoing Message Header	202ASA

### 6.3 Berths

Changes in the contents of **ALL** berths known to the IECC will be transmitted by ECS to SMART PC Link 1 **EXCEPT**:

0408	0410	0415	0416	0417	0418	0422	0424
0426	0428	0430	0432	0602	0604	0606	0608
0610	0612	614X	0891	D007	D00Y	D293	F246
F250	L313	L315	L317	L319	L321	T495	T501
T503		V179	V181	V183	V185	V187	V189
V193	V195	V197	V199	V201	V203	V207	V208
V213	V215	V216	V218	V220	V222	V224	V226
V228	V230	V234	V236	V238	V240	V242	V244
V290	V317	V319	V321	V335	DB01	DB02	DB03
DB04	DB05	DB06	DB07	DB08	DB09	DB11	DB12
DB13	DB14	DB15	DB16	DB17	DB18	DB19	DB20
DB21	DB22	DB23	DB24	DB25	DB26	LA01	LA02
RY25	RY27	VA01	VA02	VA03	VA04	VA05	APW1
APW4	LSW1	LSW2	LSW4	SSW1	SSW2	SSW4	STA1
STA2	STA3	STA4	APDF	APDS	APWX	LSCR	LSDH
LSDM	LSDR	LSFT	LSST	LSUB	LSUF	LSUG	LSUR
LSUS	SSCR	SSDH	SSDM	SSDR	SSFT	SSST	SSUB
SSUF	SSUG	SSUR	SSUS	DB10	V337	V338	A163
A170	A204	A205	A214	A215	A590		

Berths shall be transmitted to SMART PC Link 1 when the link is initialised, i.e. SENDSTART field should be set to **ALL**.

Changes in the contents of the following berths will be received by ECS from SMART PC Link 1:

*None*

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 6.4 Signalling Items

As the combined number of berths and signalling items being transferred to SMART PC Link 1 exceeds the 1024 item limit, the following rationalisation has been applied to the signalling items:

1. All track circuit identities have been removed.
2. Identities for routes going between the same signals (alternative routes) have been meshed. Details provided below.

Changes on the status of the following signalling items will be transmitted by ECS to SMART PC Link 1:

*/Address 00-0F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R13	R14	R15	R16	R17A	R17B	R19A	R19B
R19C	R20	R22A	R22B	R23A	R23B	R31	R34A
R24	R25	R26A	R26B	R27	R28	R29	R30
R34B	R34C	R35	R36A	R36B	R41A	R41B	R43
R46	R48A	R48B	R49 *	R50AM	R50BS	R50CS	R50ES
R50DS	R51	R52AM	R52B *	R52C *	R52DS	R52ES	R52FS
R53A *	R53B *	R53C *	R53D *	R53E *	R54AM	R54B *	R54CS
R54DS	R54ES	R54FS	R55A *	R55B *	R55C *	R55D *	R55E *
R55F *	R56AM	R56B *	R56CS	R56DS	R56ES	R56FS	R58A
R58B	R59	R60	R61	R62	R63	R64	R66A *
R66B *	R66C *	R66D *	R2009A	R2009B	R2009C	R2009D	R2009E
R2009F	R2011A	R2011B *	R2011C *	R2011D *	R2011E	R2014A	R2014B
R2014C	R2019A	R2019B	R2019C	R2019D	R2021A	R2021B	R2021C
R2021D	R2023A	R2023B	R2023C	R2023D	R2025A	R2025B *	R2025C
R2025D	R97	R98	R99A *	R99B *	R99C *	R100A	R100B
R102	R104	R106A *	R106B *	R106C *	R108XA *	R108XB *	-

*/Address 10-1F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R108XC *	R109AS	R109BS	R109CM	R111AS	R111BM	R111CM	R113A
R113B	R329A *	R329B *	R325	R2018	R2020	R2022A	R2022B
R2022C	R2035A	R2035B	R2035C	R2037A	R2037B	R2039	R132A
R132B	R134A	R134B	R135AM	R135B *	R135C *	R136A	R136B
R137XAM	R137XB *	R137XC *	R139AM	R139B *	R141	R143A *	R143BM
R146AM	R146BS	R148AM	R148BS	R150AM	R150BM	R150CS	R150DS
R150ES	R150FS	R150GS	R150HM	R152AM	R152BM	R152CS	R152DS
R152ES	R152FS	R152GS	R152HM	R154AM	R154BM	R154CS	R154DS
R154ES	R154FS	R154GS	R154HM	R523AM	R523B *	R523C *	R525AM
R525B *	R525C *	R527A *	R527B *	R2030A	R2030B	R2030C	R2030D
R2030E	R2030F	R2030G	R2043	R2045	R2047	R2049	R2059A
R2059B	R2059C	R2061	R2063A	R2063B	R155A *	R155BM	R155CM
R157A *	R157BM	R157CM	R159A *	R159B *	R159CS	R159DM	R160A *

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<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R160B *	R160C *	R160DS	R160E *	R161AM	R161BM	R161CS	R161DM
R162A *	R162B *	R162C *	R163AS	R163BM	R164A *	R164B *	R164C *
R165AS	R165BM	R166AM	R166BS	R167	R168XAM	R168XBS	R168XCS

/Address 20-2F

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R170A *	R170BM	R400A *	R400B *	R400C *	R401	R402	R2032A
R2032B	R2036A	R2036B	R2038A	R2038B	R2038C	R2038D	R2038E
R181A	R181B	R181C	R181D	R183XA	R183XB	R183XC	R183XD
R184AM	R184BM	R184CS	R186AM	R186BM	R186CS	R188A	R188B
R190A	R190B	R195	R197A	R197B	R199	R200XA	R200XB
R201X	R202A	R202B	R203XAM	R203XBS	R251A	R251B	R252
R253	R2071A	R2071B	R2071C	R2071D	R2073A	R2073B	R2080A
R2080B	R2081	R2084A	R2084B	R2085	R2086A	R2086B	R2086C
R521AS	R521B *	R521C *	R526	R528	R530	R2041A	R2041B
R2041C	-	-	R810	-	-	R893	R894
R895	R896	R897A	R897B	R898	S13	S14	S15
S16	S17	S19	S20	S22	S23	S24	S25
S26	S27	S29	S30	S31	S34	S35	S36
S41	S43	S46	S48	S49	S50	S51	S52
S53	S54	S55	S56	S58	S59	S60	S61
S62	S63	S64	S66	S2009	S2011	S2019	S2021

/Address 30-3F

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
S2023	S2025	S2014	S97	S98	S99	S100	S102
S104	S106	S108X	S109	S111	S113	S329	S325
S2018	S2020	S2022	S2035	S2037	S2039	S132	S134
S135	S136	S137X	S139	S141	S143	S146	S148
S150	S152	S154	S523	S525	S527	S2030	S2043
S2045	S2047	S2049	S2059	S2061	S2063	S155	S157
S159	S161	S160	S162	S164	S163	S165	S166
S167	S168X	S170	S400	S402	S401	S2032	S2036
S2038	S181	S183X	S184	S186	S188	S190	S195
S197	S199	S200X	S201X	S203X	S202	S251	S2071
S2073	S2080	S2081	S2084	S2085	S2086	S530	S521
S526	S528	S2041	S895	S896	S897	S898	S252
S253	S893	S894	S1	S2	S3	S4	S5
S6	S7	S8	S9	S10	S11	S32	S37
S39	S42	S44	S65	S67	S68	S69	S70
S71	S72	S73	S74	S75	S76	S77	S78

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/Address 40-4F

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
S79	S80	S81	S82	S83	S84	S85	S86
S87	S88	S89	S90	S91	S92	S93	S94
S95	S96	S112	S114	S116	S117	S118	S119
S120	S121	S122	S123	S124	S125	S127	S129
S327	S328	S330	S126	S128	S130	S131	S133
S169	S171	S172	S174	-	S173	S175	S176
S177	S178	S179	S180	S182	-	-	-
-	S524	S204	S205	S206	S207	S208	S209
S210	S211	S212	S213	S214	S215	S216	S217
S218	S219	S221	S584	S586	S588	S590	S591
S592	S593	S594	S596	S598	-	-	-
L50TRS	L52TRS	L54TRS	L56TRS	L58TRS	L60TRS	L62TRS	L59TRS
L61TRS	L63TRS	L64TRS	L2019TRS	L2021TRS	L2023TRS	L2025TRS	L98TRS
L100TRS	L102TRS	L104TRS	L109TRS	L111TRS	L113TRS	L2043TRS	L2045TRS
L2047TRS	L2049TRS	L146TRS	L148TRS	L152TRS	L154TRS	L155TRS	L159TRS
L161TRS	L184TRS	L190TRS	L195TRS	L197TRS	L203XTRS	LKYLDTRS	-

The following table details the meshed routes (indicated by a \* in the above tables). The meshed route is set when any of the individual route items are set.

<i>Meshed Route Name</i>	<i>Individual route items constituting the meshed route</i>					
R49	R49M	R49W				
R52B	R52B1M	R52B2M	R52B3M			
R52C	R52C1S	R52C2S				
R53A	R53AM	R53AC				
R53B	R53B1M	R53B1C	R53B2M	R53B2C		
R53C	R53CM	R53CC				
R53D	R53DM	R53DW	R53DC			
R53E	R53EM	R53EW	R53EC			
R54B	R54B1M	R54B2M				
R55A	R55AM	R55AC				
R55B	R55BM	R55BC				
R55C	R55CM	R55CW	R55CC			
R55D	R55DM	R55DW	R55DC			
R55E	R55EM	R55EW	R55EC			
R55F	R55FM	R55FC				
R56B	R56B1M	R56B2M				
R66A	R66AM	R66AW	R66AC			
R66B	R66BM	R66BC				
R66C	R66CM	R66CC				
R66D	R66DM	R66DC				
R2011B	R2011B1	R2011B2	R2011B3			
R2011C	R2011C1	R2011C2				
R2011D	R2011D1	R2011D2				

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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<i>Meshed Route Name</i>	<i>Individual route items constituting the meshed route</i>					
R2025B	R2025B1	R2025B2				
R99A	R99AM	R99AW	R99AC			
R99B	R99BM	R99BC				
R99C	R99CM	R99CC				
R106A	R106AM	R106AW	R106AC			
R106B	R106BM	R106BC				
R106C	R106CM	R106CC				
R108XA	R108XAM	R108XAC				
R108XB	R108XBM	R108XBC				
R108XC	R108XCM	R108XCC				
R329A	R329AM	R329AW	R329AC			
R329B	R329BM	R329BC				
R135B	R135BM	R135BW				
R135C	R135CM	R135CW				
R137XB	R137XBM	R137XBW				
R137XC	R137XCM	R137XCW				
R139B	R139BM	R139BW				
R143A	R143AM	R143AW				
R523B	R523BM	R523BW	R523BC			
R523C	R523CM	R523CC				
R525B	R525BM	R525BC	R525BW			
R525C	R525CM	R525CC				
R527A	R527AM	R527AC	R527AW			
R527B	R527BM	R527BC				
R155A	R155AM	R155AW				
R157A	R157AM	R157AW				
R159A	R159A1M	R159A2M				
R159B	R159B1M	R159B2M				
R160A	R160AM	R160AC	R160AW			
R160B	R160B1M	R160B1C	R160B1W	R160B2M	R160B2C	R160B2W
R160C	R160CM	R160CW				
R160E	R160EM	R160EC				
R162A	R162AM	R162AC	R162AW			
R162B	R162B1M	R162B1C	R162B1W	R162B2M	R162B2C	R162B2W
R162C	R162CM	R162CW				
R164A	R164AM	R164AC	R164AW			
R164B	R164B1M	R164B1C	R164B1W	R164B2M	R164B2C	R164B2W
R164C	R164CM	R164CW				
R170A	R170AM	R170AW				
R400A	R400AM	R400AC	R400AW			
R400B	R400BM	R400BC	R400BW			
R400C	R400CM	R400CW				
R521B	R521BM	R521BW				
R521C	R521CM	R521CW				

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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Changes on the status of the following signalling items will be transmitted by SMART PC Link 1 to ECS:

*None*

## **6.5 Link Status**

Changes in the status of remote links will be sent to DIS1, DIS2 and DIS3.

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 7 ECS INTER-UNIT LINK (2)

### 7.1 Overview

This ECS-ECS remote system link operates from port 7. It is a link to the Master/Standby computer unit with **TD** type initialisation.

### 7.2 Link Characteristics

LINK CHARACTERISTICS			
Port(s)	7	Baud Rate	19200
Physical Name	P7	Time-Out Period (secs)	1
Area	ILA2	Message Retry Count	8
Protocol	BR1810	Message Retry Field Flag	Set

### 7.3 Berths

Changes in the contents of **ALL** berths known to the IECC will be transmitted by the Master ECS computer unit to the Standby ECS computer unit and vice-versa.

### 7.4 Signalling items

Changes on the status of the following signalling items will be transmitted by the Master ECS unit to the Standby ECS unit and vice-versa.

/Address 00-0F

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R13	R14	R15	R16	R17A	R17B	R19A	R19B
R19C	R20	R22A	R22B	R23A	R23B	R31	R34A
R24	R25	R26A	R26B	R27	R28	R29	R30
R34B	R34C	R35	R36A	R36B	R41A	R41B	R43
R46	R48A	R48B	R49M	R49W	R50AM	R50BS	R50CS
R50ES	R50DS	R51	R52AM	R52B1M	R52B2M	R52B3M	R52C1S
R52C2S	R52DS	R52ES	R52FS	R53AM	R53AC	R53B1M	R53B1C
R53B2M	R53B2C	R53CM	R53CC	R53DM	R53DW	R53DC	R53EM
R53EW	R53EC	R54AM	R54B1M	R54B2M	R54CS	R54DS	R54ES
R54FS	R55AM	R55AC	R55BM	R55BC	R55CM	R55CW	R55CC
R55DM	R55DW	R55DC	R55EM	R55EW	R55EC	R55FM	R55FC
R56AM	R56B1M	R56B2M	R56CS	R56DS	R56ES	R56FS	R58A
R58B	R59	R60	R61	R62	R63	R64	R66AM
R66AW	R66AC	R66BM	R66BC	R66CM	R66CC	R66DM	R66DC
R2009A	R2009B	R2009C	R2009D	R2009E	R2009F	R2011A	R2011B1
R2011B2	R2011B3	R2011C1	R2011C2	R2011D1	R2011D2	R2011E	R2014A

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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*/Address 10-1F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R2014B	R2014C	R2019A	R2019B	R2019C	R2019D	R2021A	R2021B
R2021C	R2021D	R2023A	R2023B	R2023C	R2023D	R2025A	R2025B1
R2025B2	R2025C	R2025D	R97	R98	R99AM	R99AW	R99AC
R99BM	R99BC	R99CM	R99CC	R100A	R100B	R102	R104
R106AM	R106AW	R106AC	R106BM	R106BC	R106CM	R106CC	R108XAM
R108XAC	R108XBM	R108XBC	R108XCM	R108XCC	R109AS	R109BS	R109CM
R111AS	R111BM	R111CM	R113A	R113B	-	R329AM	R329AW
R329AC	R329BM	R329BC	R325	R2018	R2020	R2022A	R2022B
R2022C	R2035A	R2035B	R2035C	R2037A	R2037B	R2039	R132A
R132B	R134A	R134B	R135AM	R135BM	R135BW	R135CM	R135CW
R136A	R136B	R137XAM	R137XBM	R137XBW	R137XCM	R137XCW	R139AM
R139BM	R139BW	R141	R143AM	R143AW	R143BM	R146AM	R146BS
R148AM	R148BS	R150AM	R150BM	R150CS	R150DS	R150ES	R150FS
R150GS	R150HM	R152AM	R152BM	R152CS	R152DS	R152ES	R152FS
R152GS	R152HM	R154AM	R154BM	R154CS	R154DS	R154ES	R154FS
R154GS	R154HM	R523AM	R523BM	R523BW	R523BC	R523CM	R523CC

*/Address 20-2F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R525AM	R525BM	R525BC	R525BW	R525CM	R525CC	R527AM	R527AC
R527AW	R527BM	R527BC	R2030A	R2030B	R2030C	R2030D	R2030E
R2030F	R2030G	R2043	R2045	R2047	R2049	R2059A	R2059B
R2059C	R2061	R2063A	R2063B	R155AM	R155AW	R155BM	R155CM
R157AM	R157AW	R157BM	R157CM	R159A1M	R159A2M	R159B1M	R159B2M
R159CS	R159DM	R160AM	R160AC	R160AW	R160B1M	R160B1C	R160B1W
R160B2M	R160B2C	R160B2W	R160CM	R160CW	R160DS	R160EM	R160EC
R161AM	R161BM	R161CS	R161DM	R162AM	R162AC	R162AW	R162B1M
R162B1C	R162B1W	R162B2M	R162B2C	R162B2W	R162CM	R162CW	R163AS
R163BM	R164AM	R164AC	R164AW	R164B1M	R164B1C	R164B1W	R164B2M
R164B2C	R164B2W	R164CM	R164CW	R165AS	R165BM	R166AM	R166BS
R167	R168XAM	R168XBS	R168XCS	R170AM	R170AW	R170BM	R400AM
R400AC	R400AW	R400BM	R400BC	R400BW	R400CM	R400CW	R401
R402	R2032A	R2032B	R2036A	R2036B	R2038A	R2038B	R2038C
R2038D	R2038E	R181A	R181B	R181C	R181D	R183XA	R183XB
R183XC	R183XD	R184AM	R184BM	R184CS	R186AM	R186BM	R186CS

*/Address 30-3F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R188A	R188B	R190A	R190B	R195	R197A	R197B	R199
R200XA	R200XB	R201X	R202A	R202B	R203XAM	R203XBS	R251A
R251B	R252	R253	R2071A	R2071B	R2071C	R2071D	R2073A
R2073B	R2080A	R2080B	R2081	R2084A	R2084B	R2085	R2086A
R2086B	R2086C	R521AS	R521BM	R521BW	R521CM	R521CW	R526

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<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R528	R530	R2041A	R2041B	R2041C	-	-	R810
-	-	R893	R894	R895	R896	R897A	R897B
R898	S13	S14	S15	S16	S17	S19	S20
S22	S23	S24	S25	S26	S27	S29	S30
S31	S34	S35	S36	S41	S43	S46	S48
S49	S50	S51	S52	S53	S54	S55	S56
S58	S59	S60	S61	S62	S63	S64	S66
S2009	S2011	S2019	S2021	S2023	S2025	S2014	S97
S98	S99	S100	S102	S104	S106	S108X	S109
S111	S113	S329	S325	S2018	S2020	S2022	S2035
S2037	S2039	S132	S134	S135	S136	S137X	S139

*/Address 40-4F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
S141	S143	S146	S148	S150	S152	S154	S523
S525	S527	S2030	S2043	S2045	S2047	S2049	S2059
S2061	S2063	S155	S157	S159	S161	S160	S162
S164	S163	S165	S166	S167	S168X	S170	S400
S402	S401	S2032	S2036	S2038	S181	S183X	S184
S186	S188	S190	S195	S197	S199	S200X	S201X
S203X	S202	S251	S2071	S2073	S2080	S2081	S2084
S2085	S2086	S530	S521	S526	S528	S2041	S895
S896	S897	S898	S252	S253	S893	S894	S1
S2	S3	S4	S5	S6	S7	S8	S9
S10	S11	S32	S37	S39	S42	S44	S65
S67	S68	S69	S70	S71	S72	S73	S74
S75	S76	S77	S78	S79	S80	S81	S82
S83	S84	S85	S86	S87	S88	S89	S90
S91	S92	S93	S94	S95	S96	S112	S114
S116	S117	S118	S119	S120	S121	S122	S123

*/Address 50-5F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
S124	S125	S127	S129	S327	S328	S330	S126
S128	S130	S131	S133	S169	S171	S172	S174
-	S173	S175	S176	S177	S178	S179	S180
S182	-	-	-	-	S524	S204	S205
S206	S207	S208	S209	S210	S211	S212	S213
S214	S215	S216	S217	S218	S219	S221	S584
S586	S588	S590	S591	S592	S593	S594	S596
S598	-	-	-	-	-	-	-
L50TRS	L52TRS	L54TRS	L56TRS	L58TRS	L60TRS	L62TRS	L59TRS
L61TRS	L63TRS	L64TRS	L2019TRS	L2021TRS	L2023TRS	L2025TRS	L98TRS
L100TRS	L102TRS	L104TRS	L109TRS	L111TRS	L113TRS	L2043TRS	L2045TRS
L2047TRS	L2049TRS	L146TRS	L148TRS	L152TRS	L154TRS	L155TRS	L159TRS
L161TRS	L184TRS	L190TRS	L195TRS	L197TRS	L203XTRS	LKYLDTRS	-

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
TOV	TPDW	TPLP	-	-	-	-	-
-	SL317	SL319	SV197	SV199	SV201	SV203	SV207
SV216	SV220	SV222	SV224	SV250	-	SV319	SV236

/Address 60-64

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
RRY25	RL313A	RL313B	RL313C	RL315A	RL315B	RL317	RL319A
RL319B	-	-	-	-	-	-	-
RV197	RV199A	RV199B	RV201A	RV201B	RV201C	RV203A	RV203B
RV203C	RV216A	RV216B	RV220A	RV220B	RV220C	RV222A	RV222B
RV224	RV250	RV290	RV319	RV321A	RV321B	-	-

## 7.5 Link Status

Changes in the status of the remote links will be sent to DIS1, DIS2 and DIS3.

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 8 ECS LINK TO SMART PC LINK 2

### 8.1 Overview

This ECS remote system link operates from port 12. It is a link to SMART PC Link 2 with **ETB** type initialisation.

### 8.2 Link Characteristics

LINK CHARACTERISTICS			
Port(s)	12	Time-Out Period (secs)	2
Physical Name	PC	Message Retry Count	3
Area	SMT2	Message Retry Field Flag	Set
Protocol	BR1810	Incoming Message Header	ASA102
Baud Rate	9600	Outgoing Message Header	102ASA

### 8.3 Berths

Changes in the contents of **ALL** berths known to the IECC will be transmitted by ECS to SMART PC Link 2 **EXCEPT**:

0408	0410	0415	0416	0417	0418	0422	0424
0426	0428	0430	0432	0602	0604	0606	0608
0610	0612	614X	0891	D007	D00Y	D293	F246
F250	L313	L315	L317	L319	L321	T495	T501
T503		V179	V181	V183	V185	V187	V189
V193	V195	V197	V199	V201	V203	V207	V208
V213	V215	V216	V218	V220	V222	V224	V226
V228	V230	V234	V236	V238	V240	V242	V244
V290	V317	V319	V321	V335	DB01	DB02	DB03
DB04	DB05	DB06	DB07	DB08	DB09	DB11	DB12
DB13	DB14	DB15	DB16	DB17	DB18	DB19	DB20
DB21	DB22	DB23	DB24	DB25	DB26	LA01	LA02
RY25	RY27	VA01	VA02	VA03	VA04	VA05	APW1
APW4	LSW1	LSW2	LSW4	SSW1	SSW2	SSW4	STA1
STA2	STA3	STA4	APDF	APDS	APWX	LSCR	LSDH
LSDM	LSDR	LSFT	LSST	LSUB	LSUF	LSUG	LSUR
LSUS	SSCR	SSDH	SSDM	SSDR	SSFT	SSST	SSUB
SSUF	SSUG	SSUR	SSUS	DB10	V337	V338	A163
A170	A204	A205	A214	A215	A590		

Berths shall be transmitted to SMART PC Link 2 when the link is initialised, i.e. SENDSTART field should be set to **ALL**.

Changes in the contents of the following berths will be received by ECS from SMART PC Link 2:

*None*

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 8.4 Signalling Items

As the combined number of berths and signalling items being transferred to SMART PC Link 2 exceeds the 1024 item limit, the following rationalisation has been applied to the signalling items:

1. All track circuit identities have been removed.
2. Identities for routes going between the same signals (alternative routes) have been meshed. Details provided below.

Changes on the status of the following signalling items will be transmitted by ECS to SMART PC Link 2:

*Address 00-0F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R13	R14	R15	R16	R17A	R17B	R19A	R19B
R19C	R20	R22A	R22B	R23A	R23B	R31	R34A
R24	R25	R26A	R26B	R27	R28	R29	R30
R34B	R34C	R35	R36A	R36B	R41A	R41B	R43
R46	R48A	R48B	R49 *	R50AM	R50BS	R50CS	R50ES
R50DS	R51	R52AM	R52B *	R52C *	R52DS	R52ES	R52FS
R53A *	R53B *	R53C *	R53D *	R53E *	R54AM	R54B *	R54CS
R54DS	R54ES	R54FS	R55A *	R55B *	R55C *	R55D *	R55E *
R55F *	R56AM	R56B *	R56CS	R56DS	R56ES	R56FS	R58A
R58B	R59	R60	R61	R62	R63	R64	R66A *
R66B *	R66C *	R66D *	R2009A	R2009B	R2009C	R2009D	R2009E
R2009F	R2011A	R2011B *	R2011C *	R2011D *	R2011E	R2014A	R2014B
R2014C	R2019A	R2019B	R2019C	R2019D	R2021A	R2021B	R2021C
R2021D	R2023A	R2023B	R2023C	R2023D	R2025A	R2025B *	R2025C
R2025D	R97	R98	R99A *	R99B *	R99C *	R100A	R100B
R102	R104	R106A *	R106B *	R106C *	R108XA *	R108XB *	-

*/Address 10-1F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R108XC *	R109AS	R109BS	R109CM	R111AS	R111BM	R111CM	R113A
R113B	R329A *	R329B *	R325	R2018	R2020	R2022A	R2022B
R2022C	R2035A	R2035B	R2035C	R2037A	R2037B	R2039	R132A
R132B	R134A	R134B	R135AM	R135B *	R135C *	R136A	R136B
R137XAM	R137XB *	R137XC *	R139AM	R139B *	R141	R143A *	R143BM
R146AM	R146BS	R148AM	R148BS	R150AM	R150BM	R150CS	R150DS
R150ES	R150FS	R150GS	R150HM	R152AM	R152BM	R152CS	R152DS
R152ES	R152FS	R152GS	R152HM	R154AM	R154BM	R154CS	R154DS
R154ES	R154FS	R154GS	R154HM	R523AM	R523B *	R523C *	R525AM
R525B *	R525C *	R527A *	R527B *	R2030A	R2030B	R2030C	R2030D
R2030E	R2030F	R2030G	R2043	R2045	R2047	R2049	R2059A
R2059B	R2059C	R2061	R2063A	R2063B	R155A *	R155BM	R155CM
R157A *	R157BM	R157CM	R159A *	R159B *	R159CS	R159DM	R160A *

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R160B *	R160C *	R160DS	R160E *	R161AM	R161BM	R161CS	R161DM
R162A *	R162B *	R162C *	R163AS	R163BM	R164A *	R164B *	R164C *
R165AS	R165BM	R166AM	R166BS	R167	R168XAM	R168XBS	R168XCS

*/Address 20-2F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
R170A *	R170BM	R400A *	R400B *	R400C *	R401	R402	R2032A
R2032B	R2036A	R2036B	R2038A	R2038B	R2038C	R2038D	R2038E
R181A	R181B	R181C	R181D	R183XA	R183XB	R183XC	R183XD
R184AM	R184BM	R184CS	R186AM	R186BM	R186CS	R188A	R188B
R190A	R190B	R195	R197A	R197B	R199	R200XA	R200XB
R201X	R202A	R202B	R203XAM	R203XBS	R251A	R251B	R252
R253	R2071A	R2071B	R2071C	R2071D	R2073A	R2073B	R2080A
R2080B	R2081	R2084A	R2084B	R2085	R2086A	R2086B	R2086C
R521AS	R521B *	R521C *	R526	R528	R530	R2041A	R2041B
R2041C	-	-	R810	-	-	R893	R894
R895	R896	R897A	R897B	R898	S13	S14	S15
S16	S17	S19	S20	S22	S23	S24	S25
S26	S27	S29	S30	S31	S34	S35	S36
S41	S43	S46	S48	S49	S50	S51	S52
S53	S54	S55	S56	S58	S59	S60	S61
S62	S63	S64	S66	S2009	S2011	S2019	S2021

*/Address 30-3F*

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
S2023	S2025	S2014	S97	S98	S99	S100	S102
S104	S106	S108X	S109	S111	S113	S329	S325
S2018	S2020	S2022	S2035	S2037	S2039	S132	S134
S135	S136	S137X	S139	S141	S143	S146	S148
S150	S152	S154	S523	S525	S527	S2030	S2043
S2045	S2047	S2049	S2059	S2061	S2063	S155	S157
S159	S161	S160	S162	S164	S163	S165	S166
S167	S168X	S170	S400	S402	S401	S2032	S2036
S2038	S181	S183X	S184	S186	S188	S190	S195
S197	S199	S200X	S201X	S203X	S202	S251	S2071
S2073	S2080	S2081	S2084	S2085	S2086	S530	S521
S526	S528	S2041	S895	S896	S897	S898	S252
S253	S893	S894	S1	S2	S3	S4	S5
S6	S7	S8	S9	S10	S11	S32	S37
S39	S42	S44	S65	S67	S68	S69	S70
S71	S72	S73	S74	S75	S76	S77	S78

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/Address 40-4F

<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>	<b>BIT 8</b>
S79	S80	S81	S82	S83	S84	S85	S86
S87	S88	S89	S90	S91	S92	S93	S94
S95	S96	S112	S114	S116	S117	S118	S119
S120	S121	S122	S123	S124	S125	S127	S129
S327	S328	S330	S126	S128	S130	S131	S133
S169	S171	S172	S174	-	S173	S175	S176
S177	S178	S179	S180	S182	-	-	-
-	S524	S204	S205	S206	S207	S208	S209
S210	S211	S212	S213	S214	S215	S216	S217
S218	S219	S221	S584	S586	S588	S590	S591
S592	S593	S594	S596	S598	-	-	-
L50TRS	L52TRS	L54TRS	L56TRS	L58TRS	L60TRS	L62TRS	L59TRS
L61TRS	L63TRS	L64TRS	L2019TRS	L2021TRS	L2023TRS	L2025TRS	L98TRS
L100TRS	L102TRS	L104TRS	L109TRS	L111TRS	L113TRS	L2043TRS	L2045TRS
L2047TRS	L2049TRS	L146TRS	L148TRS	L152TRS	L154TRS	L155TRS	L159TRS
L161TRS	L184TRS	L190TRS	L195TRS	L197TRS	L203XTRS	LKYLDTRS	-

The following table details the meshed routes (indicated by a \* in the above tables). The meshed route is set when any of the individual route items are set.

<i>Meshed Route Name</i>	<i>Individual route items constituting the meshed route</i>					
R49	R49M	R49W				
R52B	R52B1M	R52B2M	R52B3M			
R52C	R52C1S	R52C2S				
R53A	R53AM	R53AC				
R53B	R53B1M	R53B1C	R53B2M	R53B2C		
R53C	R53CM	R53CC				
R53D	R53DM	R53DW	R53DC			
R53E	R53EM	R53EW	R53EC			
R54B	R54B1M	R54B2M				
R55A	R55AM	R55AC				
R55B	R55BM	R55BC				
R55C	R55CM	R55CW	R55CC			
R55D	R55DM	R55DW	R55DC			
R55E	R55EM	R55EW	R55EC			
R55F	R55FM	R55FC				
R56B	R56B1M	R56B2M				
R66A	R66AM	R66AW	R66AC			
R66B	R66BM	R66BC				
R66C	R66CM	R66CC				
R66D	R66DM	R66DC				
R2011B	R2011B1	R2011B2	R2011B3			
R2011C	R2011C1	R2011C2				
R2011D	R2011D1	R2011D2				
R2025B	R2025B1	R2025B2				

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<i>Meshed Route Name</i>	<i>Individual route items constituting the meshed route</i>					
R99A	R99AM	R99AW	R99AC			
R99B	R99BM	R99BC				
R99C	R99CM	R99CC				
R106A	R106AM	R106AW	R106AC			
R106B	R106BM	R106BC				
R106C	R106CM	R106CC				
R108XA	R108XAM	R108XAC				
R108XB	R108XBM	R108XBC				
R108XC	R108XCM	R108XCC				
R329A	R329AM	R329AW	R329AC			
R329B	R329BM	R329BC				
R135B	R135BM	R135BW				
R135C	R135CM	R135CW				
R137XB	R137XBM	R137XBW				
R137XC	R137XCM	R137XCW				
R139B	R139BM	R139BW				
R143A	R143AM	R143AW				
R523B	R523BM	R523BW	R523BC			
R523C	R523CM	R523CC				
R525B	R525BM	R525BC	R525BW			
R525C	R525CM	R525CC				
R527A	R527AM	R527AC	R527AW			
R527B	R527BM	R527BC				
R155A	R155AM	R155AW				
R157A	R157AM	R157AW				
R159A	R159A1M	R159A2M				
R159B	R159B1M	R159B2M				
R160A	R160AM	R160AC	R160AW			
R160B	R160B1M	R160B1C	R160B1W	R160B2M	R160B2C	R160B2W
R160C	R160CM	R160CW				
R160E	R160EM	R160EC				
R162A	R162AM	R162AC	R162AW			
R162B	R162B1M	R162B1C	R162B1W	R162B2M	R162B2C	R162B2W
R162C	R162CM	R162CW				
R164A	R164AM	R164AC	R164AW			
R164B	R164B1M	R164B1C	R164B1W	R164B2M	R164B2C	R164B2W
R164C	R164CM	R164CW				
R170A	R170AM	R170AW				
R400A	R400AM	R400AC	R400AW			
R400B	R400BM	R400BC	R400BW			
R400C	R400CM	R400CW				
R521B	R521BM	R521BW				
R521C	R521CM	R521CW				

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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Changes on the status of the following signalling items will be transmitted by SMART PC Link 2 to ECS:

*None*

## **8.5 Link Status**

Changes in the status of remote links will be sent to DIS1, DIS2 and DIS3.

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 9 ECS LINK 1 TO IECC A RII

### 9.1 Overview

This ECS remote system link operates from port 13. It is a link to IECC A RII Link 1 with **ETB** type initialisation.

### 9.2 Link Characteristics

LINK CHARACTERISTICS			
Port(s)	13	Baud Rate	1200
Physical Name	PD	Time-Out Period (secs)	N/A
Area	ARC1	Message Retry Count	N/A
Protocol	S2	Message Retry Field Flag	N/A

### 9.3 Berths

Changes in the contents of the following berths will be transmitted by ECS to the IECC A RII Link 1:

*None*

Changes in the contents of the following berths will be received by ECS from the IECC A RII Link 1:

*None*

### 9.4 Signalling Items

Changes on the status of the following signalling items will be transmitted by the ECS to the IECC A RII Link 1:

*/Card 0 - DIP*

<b>BIT 0</b>	<b>BIT1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT 5</b>	<b>BIT 6</b>	<b>BIT 7</b>
RL313A	RL313B	RL313C	RL315A	RL315B	RL317	RL319A	RL319B
-	SL317	SL319	-	-	-	-	-
-	-	-	-	-	-	RV197	RV199A
RV199B	RV201A	RV201B	RV201C	RV203A	RV203B	RV203C	RV216A

*/Card 1 - DIP*

<b>BIT 0</b>	<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT4</b>	<b>BIT 5</b>	<b>BIT6</b>	<b>BIT 7</b>
RV216B	RV220A	RV220B	RV220C	RV222A	RV222B	RV224	RV250
RV290	RV319	RV321A	RV321B	SV197	SV199	SV201	SV203
SV207	SV216	SV220	SV222	SV224	SV250	SV319	SV236
RRY25	-	-	-	-	-	-	-

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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Changes on the status of the following signalling items will be received by the ECS from the IECC A RII Link 1:

*None*

## **9.5 Link Status**

Changes in the status of remote links will be sent to DIS1, DIS2 and DIS3.

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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## 10 ECS LINK 2 TO IECC A RII

### 10.1 Overview

This ECS remote system link operates from port 16. It is a link to IECC A RII Link 2 with **ETB** type initialisation.

### 10.2 Link Characteristics

LINK CHARACTERISTICS			
Port(s)	16	Baud Rate	1200
Physical Name	PG	Time-Out Period (secs)	N/A
Area	ARC2	Message Retry Count	N/A
Protocol	S2	Message Retry Field Flag	N/A

### 10.3 Berths

Changes in the contents of the following berths will be transmitted by ECS to the IECC A RII Link 2:

*None*

Changes in the contents of the following berths will be received by ECS from the IECC A RII Link 2:

*None*

### 10.4 Signalling Items

Changes on the status of the following signalling items will be transmitted by the ECS to the IECC A RII Link 2:

*/Card 0 - DIP*

<b>BIT 0</b>	<b>BIT 1</b>	<b>BIT 2</b>	<b>BIT 3</b>	<b>BIT 4</b>	<b>BIT5</b>	<b>BIT 6</b>	<b>BIT7</b>
RL313A	RL313B	RL313C	RL315A	RL315B	RL317	RL319A	RL319B
-	SL317	SL319	-	-	-	-	-
-	-	-	-	-	-	RV197	RV199A
RV199B	RV201A	RV201B	RV201C	RV203A	RV203B	RV203C	RV216A

*/Card 1 - DIP*

<b>BIT 0</b>	<b>BIT 1</b>	<b>BIT2</b>	<b>BIT 3</b>	<b>BIT4</b>	<b>BIT 5</b>	<b>BIT6</b>	<b>BIT7</b>
RV216B	RV220A	RV220B	RV220C	RV222A	RV222B	RV224	RV250
RV290	RV319	RV321A	RV321B	SV197	SV199	SV201	SV203
SV207	SV216	SV220	SV222	SV224	SV250	SV319	SV236
RRY25	-	-	-	-	-	-	-

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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Changes on the status of the following signalling items will be received by the ECS from the IECC A RII Link 2:

*None*

## **10.5 Link Status**

Changes in the status of remote links will be sent to DIS1, DIS2 and DIS3.

Version UX1	10A/DC/SPE/ECS	<b>ASHFORD IECC A EXTERNAL COMMUNICATIONS SUBSYSTEM SPECIFICATION</b>
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