Division / Business Unit:	Safety & Systems
Function:	Operations Interface
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HG General Operation Information

RAS HHN Section Page

Applicability

ARTC Network Wide

SMS

Publication Requirement

External Only

Primary Source

Document Status

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1.2	22 May 24	Operations Standards	Stakeholders	Operations Standards Manager	Head of Engineering Standards 29/05/2024

Amendment Record

Amendments to the RAS are published at the following link
https://www.artc.com.au/customers/standards/route/access/
All changes in this document are highlighted with this colour

Table of Contents

1 Introduction

The following sections cover general operating and interface information specific to the ARTC Heavy Haul Network and Stratford Coal Export Services. This section page shall be read in conjunction with specific RAS section pages H1 through H4 and RAS section page D33.

2 Running Times – Coal Trains

Refer to Indicative Running Times published on ARTC Website, https://www.artc.com.au/customers/operations/.

3 Train Length

The operational train length limits for these trains are:

- 1,545 metres between Newcastle (Islington Junction) and Ulan
- 1,329 metres between Muswellbrook and Narrabri (via Willow Tree)
- 1,500 metres between Telarah and Stratford Coal (per RAS GI 2.3)

Under normal operating conditions, all trains must be configured per its allocated train path length.

Provided that all other Route Access Standard requirements are met, the ARTC Train Transit Manager (TTM) is approved to authorise ECP trains to be recovered with up to 70m of “rescue” locomotives in addition to the allowed length for the train configuration being approved.

4 Coal Train Configurations

Hunter Valley Coal trains operate within standardised performance parameters to ensure that the system runs as efficiently as possible to provide the best service to the overall supply chain. As such, the “Standard” coal trains outlined in this document are approved for general operation in the Hunter Valley Coal Supply Chain. Specific train configurations do not need to be listed in this document to operate, provided that the train is compliant with all applicable requirements.

4.1 Train Configuration Approvals

All changes to the listed train configurations in this document must be approved through the “Access to Our Hunter Valley Network” page of the ARTC website. This can be found at: www.artc.com.au/customers/access/access-hunter-valley/.

Applications for new and altered distributed power consist configurations must also be supported with a risk assessment, test plan and analysis as detailed in the RISSB Code of Practice – Distributed Power Freight Trains. New and altered distributed power consist configurations may require trials prior to being accepted by ARTC.

4.2 Routes

All listed train configurations in this document are approved to:

- operate within the referred region, and
- operate loaded in the UP Direction only, unless otherwise noted.

NOTES TO BE READ IN CONJUNCTION WITH THE TABLE BELOW

1. *Trains loaded at Ashton Coal and turned at Ravensworth and Newdell only, alternate turning locations such as Mt Arthur or Bengalla require trailing load reductions.*
2. *Refer to RAS H2 for banking advice between Werris Creek and Parkville that is applicable for Gunnedah services.*

Table 4.2 – Defined operating regions

Region	Loading locations
HC (Hunter Valley Coal)	Antiene, Ashton note 1, Bengalla, Bloomfield, Camberwell, Drayton, Hunter Valley, Liddell, Mangoola, Mt Arthur, Mt Owen, Mt Pleasant, Mt Thorley, Newdell, Ravensworth, Rixs Creek, Saxonvale, Wambo
GC (Gunnedah Coal) note 2	Boggabri, Dartbrook, East Boggabri, Gunnedah, Maules Creek, Narrabri, Werris Creek
UC (Ulan Coal)	Moolarben, Ulan, Wilpinjong
Bloomfield	Bloomfield
Stratford	Stratford

4.3 Vehicle Definitions

The following groups are used to allow similar vehicles to be referred by a consistent term throughout the train configuration tables.

RAS HG Locomotive “HGL” is an acronym in use for this document only and is not linked to the rolling stock registration details.

NOTES TO BE READ IN CONJUNCTION WITH THE TABLE BELOW

1. *This is not an exhaustive list of vehicle classes that meet the defining parameter.*
2. *No more than four 180t locomotives (hauling/powered or dead attached) shall be marshalled on the head-end.*

Table 4.3 – Vehicle group definitions

Group	Defining parameters	Class codes note 1
HGL01 note 2	Locomotive Models: C40acH, C44acHi Locomotive Mass: 180t	5000, 5020
HGL02	Locomotive Models: C44aci, GT46C Ace Brake Control Type: ECP	6000, 6020, 92, 93, ACD, CEY, CF, GWU, XRN TT, TT100, WH
HGL03 note 2	Locomotive Models: GT46C Locomotive Mass: 180t	90
HGL04	Locomotive Models: GT46C Locomotive Mass: 167t	90
HGL05	Locomotive Models: AT42CW-2T	82
120t ECP Hopper	Gross Mass per Wagon: 120t Brake Control Type: ECP	Various
120t Hopper	Gross Mass per Wagon: 120t	NHRH, NHWH, NHYH, PHCH, RHCH, RHFH, RHHH

4.4 Approved Standard Head End Hauled Configurations

The following table summarises approved standard head end hauled configurations for operation within the referred region.

These Head End Hauled train configurations have been accepted as “Standard” trains for operation within the listed region(s).

NOTES TO BE READ IN CONJUNCTION WITH THE TABLE BELOW

General Note:

- *Approvals for operating short trains is offered for operational resilience purposes and ensuring the maximum approved standard configuration is operated will be managed in consultation with the Rolling Stock Operator (RSO).*

Referenced Note:

1. *Bloomfield services may only operate loaded on the Coal Line(s) between Warabrook and Waratah, that is these services are to pass under the Main Lines through the Hanbury Dive (167.400km).*

Table 4.4 – Approved Standard Head End Hauled Configurations

Region	Operator	Configuration	Maximum Train Length
HC & UC	Aurizon	2×HGL01 + up to 88×120t ECP Hoppers	1,545m
HC & UC	Aurizon	1×HGL01/HGL02 + 2×HGL02 + up to 96×120t ECP Hoppers	1,545m
HC & UC	Pacific National	3×HGL02 + up to 96×120t ECP Hoppers	1,545m
HC & UC	Pacific National	3×HGL03 + up to 96×120t ECP Hoppers	1,545m
HC & UC	Pacific National	3×HGL03/HGL04 + up to 92×120t ECP Hoppers	1,545m
HC & UC	One Rail	3×HGL02 + up to 96×120t ECP Hoppers	1,545m
GC	Aurizon	2×HGL01 + up to 82×120t ECP Hoppers	1,329m
GC	Aurizon	1×HGL01/HGL02 + 2×HGL02 + up to 82×120t ECP Hoppers	1,329m
GC	Pacific National	3×HGL03/HGL04 + up to 82×120t ECP Hoppers	1,329m
GC	Pacific National	3×HGL02 + up to 82×120t ECP Hoppers	1,329m
GC	One Rail	3×HGL02 + up to 82×120t ECP Hoppers	1,329m
Bloomfield	Pacific National	2×HGL02 + up to 96×120t ECP Hoppers note 1	1,545m
Stratford	Pacific National	4×HGL05 + up to 82×120t Hoppers (short loaded to 100t max)	1,500m
Stratford	Pacific National	3×HGL02 + up to 82×120t ECP Hoppers (short loaded to 100t gross max)	1,500m

4.5 Approved Standard Distributed Power Configurations

The following table summarises approved standard distributed power configurations for operation within the referred region.

These Distributed Power train configurations have been accepted as “Standard” trains for operation within the listed region(s).

NOTES TO BE READ IN CONJUNCTION WITH THE TABLE BELOW

General Notes:

- *RAS GI section 7.3 “Distributed Power” applies.*
- *Approvals for shorter trains is for operational resilience purposes such as:*
  - *wagon shortages; or*
  - *removing vehicles with non-compliant loads; or*
  - *removing vehicles that become defective in operation.*
- *Where trains are not banked, it is recommended to maximise the number of wagons in mid-train rakes. As such, wagons after the last locomotive in the train are to be removed where possible.*

Referenced Notes:

1. *Reduction of the number of wagons given to manage defective vehicles that require removal. It is recommended for the operators to minimise the number of loaded journeys completed with a reduced number of wagons.*
2. *Reduction of the number of wagons to less than 22 requires additional approval.*

Table 4.5 – Approved Standard Distributed Power Configurations

Region	Operator	DP Mode	Configuration	Maximum Train Length
HC & UC	Aurizon	Wired	1×HGL01 + (80 – 90)×120t ECP Hoppers + 1×HGL01	1,545m
HC & UC	Aurizon	Wired	2×HGL02 + (80 – 88)×120t ECP Hoppers + 1×HGL01/HGL02	1,545m
HC & UC	Aurizon	Wired	2×HGL01/HGL02 + (80 – 96)×120t ECP Hoppers + 1×HGL01	1,545m
HC & UC	Pacific National	Wired	2×HGL02 + (50 – 60) note 1 ×120t ECP Hoppers + 1×HGL02 + up to 36×120t ECP Hoppers	1,545m
HC & UC	Pacific National	Wired	1×HGL02 + (50 – 60) note 1 ×120t ECP Hoppers + 2×HGL02 + up to 36×120t ECP Hoppers	1,545m
GC	Pacific National	Wired	2×HGL02 + (50 – 60) note 1 ×120t ECP Hoppers + 1×HGL02 + 22×120t ECP Hoppers note 2	1,329m
Stratford	Pacific National	Wired	2×HGL02 + (50 – 60) note 1 ×120t ECP Hoppers + 1×HGL02 + 22×120t ECP Hoppers note 2 (short loaded to 100t gross max)	1,329m

4.6 Approved Non-Conformant Configurations

The following table summarises approved non-conformant configurations for operation within the referred region.

These train configurations are approved for operation; however they are not accepted as "Standard" trains by ARTC.

NOTES TO BE READ IN CONJUNCTION WITH THE TABLE BELOW

General Notes:

- *RAS GI section 7.3 "Distributed Power" applies.*
- *Approvals for shorter trains is for operational resilience purposes such as:*
  - *wagon shortages; or*
  - *removing vehicles with non-compliant loads; or*
  - *removing vehicles that become defective in operation.*
- *Where trains are not banked, it is recommended to maximise the number of wagons in mid-train rakes. As such, wagons after the last locomotive in the train are to be removed where possible.*

Referenced Notes:

1. *This train runs overlength to Hexham and is remarshalled into two trains each with 2×HGL02 + 44×120t ECP Hoppers.*
2. *This train unloads at Newdell, however is approved within the Hunter Coal and Ulan Coal regions as required.*
3. *The route between Islington Junction, Farley and Telarah inclusive of Newcastle Ports is approved for running empty trains in either the up or down direction.*
4. *Reduction of the number of wagons to less than 40 requires additional approval.*
5. *No more than one of this group of two HGL02 type locomotives are permitted to be powering.*

Table 4.6 – Approved Non-conformant Configurations

Region	Operator	DP Mode	Configuration	Maximum Train Length
HC note 1 & UC note 1	Aurizon	Wired	2×HGL02 + (40 – 44)×120t ECP Hoppers + 2×HGL02 + up to 44×120t ECP Hoppers	1,552m
HC note 2 & UC note 2	Aurizon	Wired	1×HGL02 + (40 – 44)×120t ECP Hoppers + 1×HGL02	1,545m
See Note 3	Aurizon	Wired	2xHGL02 note 5 + (40 – 46) note 4 x120t ECP Hoppers + 1xHGL02 (all 120t ECP Hoppers at tare mass)	900m
See Note 3	Aurizon	Wired	1xHGL02 + (40 – 46) note 4 x120t ECP Hoppers + 2xHGL02 note 5 (all 120t ECP Hoppers at tare mass)	900m
See Note 3	Aurizon	Wired	1xHGL02 + (40 – 46) note 4 x120t ECP Hoppers + 1xHGL02 (all 120t ECP Hoppers at tare mass)	900m