The following notes & location diagram should help in understanding and operating the Valley Lines simulation.

Motive Power

South Wales main line services (to and from Swansea via Newport and Cardiff Central) are operated by HSTs with 7 trailer cars, total mass 378te, braking force 38te, power 3360Kw and maximum speed 201km/h.

Secondary services are operated by 2-car Class 150s, total mass 72te, braking force 7te, power 426Kw and maximum speed 121km/h. 4-car sets have the same performance so are not defined separately.

Merry-Go-Round coal trains run between Tower Colliery at Hirwaun near Aberdare and Aberthaw Power Station, operated by Class 66 locos pulling 30 x 45te wagons, total mass 1477te, braking force 70te, power 2420kW and maximum speed 56km/h.

Headcode Allocations

These use the Digit-Letter-Digit-Digit format, where the first digit denotes the service group (only relevant to ensure uniqeness); the letter code gives the service type as listed below; and the last two digits are to distinguish between different trains that operate the service.

Feeder and finishing services begin with a zero and use the letter corresponding to the service that is served. The last two digits are to ensure uniqeness.

Letter codes are in groups of two, where the first letter denotes services running generally towards the south and/or east, and the second running in the opposite direction. They are as follows:

Main line services from Swansea	A	Bridgend to Merthyr	M
Main line services to Swansea	B	Aberdare to Barry Island	N
Ebbw Vale to Cardiff	C	Barry Island to Aberdare	P
Cardiff to Ebbw Vale	D	Queen Street to Cardiff Bay	Q
Treherbert to Cardiff	E	Cardiff Bay to Queen Street	R
Cardiff to Treherbert	F	Maesteg to Cardiff	S
Rhymney to Penarth	G	Cardiff to Maesteg	T
Penarth to Rhymney	H	Radyr to Cardiff	U
Coryton to Cardiff	J	Cardiff to Radyr	V
Cardiff to Coryton	K	Merry-Go-Round coal trains	W
Merthyr to Bridgend	L		

Special Precautions

Care is needed at Cardiff Central to ensure trains are routed into appropriate platforms, because platform allocation is restricted. Appropriate platforms are as follows:

> Services from Swansea & Bridgend towards Newport (Code A) should use 0, 1, 2 or 3, preferably 2.
> Services from Newport towards Bridgend & Swansea (Code B) should use 3 or 4, preferably 3.
> Services from Maesteg via Bridgend (Code S) should use 3 or 4, preferably 4.
> Services from Radyr via Ninian Park and returning (Code U) should use 4, 6, 7 or 8, preferably 8.
> Services from Grangetown (Codes H, M, P) should use 4, 6, 7 or 8, but preferably not 8, as onward travel to
>   Queen Street risks fouling trains coming the other way.
> Services from Queen Street to Central travelling on to Grangetown (Codes G, L, N) should use 3, 4, 7 or 8,
>   preferably 7, but must not use 6 as there is no connection to the Grangetown line.
> Services from Queen Street terminating at Central and returning (Codes E, J) should use 3, 4, 6, 7 or 8,
>   preferably 6 or 7 but not 8 because of the fouling risk.
> Services from Ebbw Vale terminating at Central and returning (Code C) should use 3, 4, 6, 7 or 8, preferably 6 or
> 7 but not 8 because of the fouling risk.

Cardiff Queen Street platforms 2 & 3 are for southbound services, 4 & 5 for northbound services, and 1 for Cardiff Bay services.
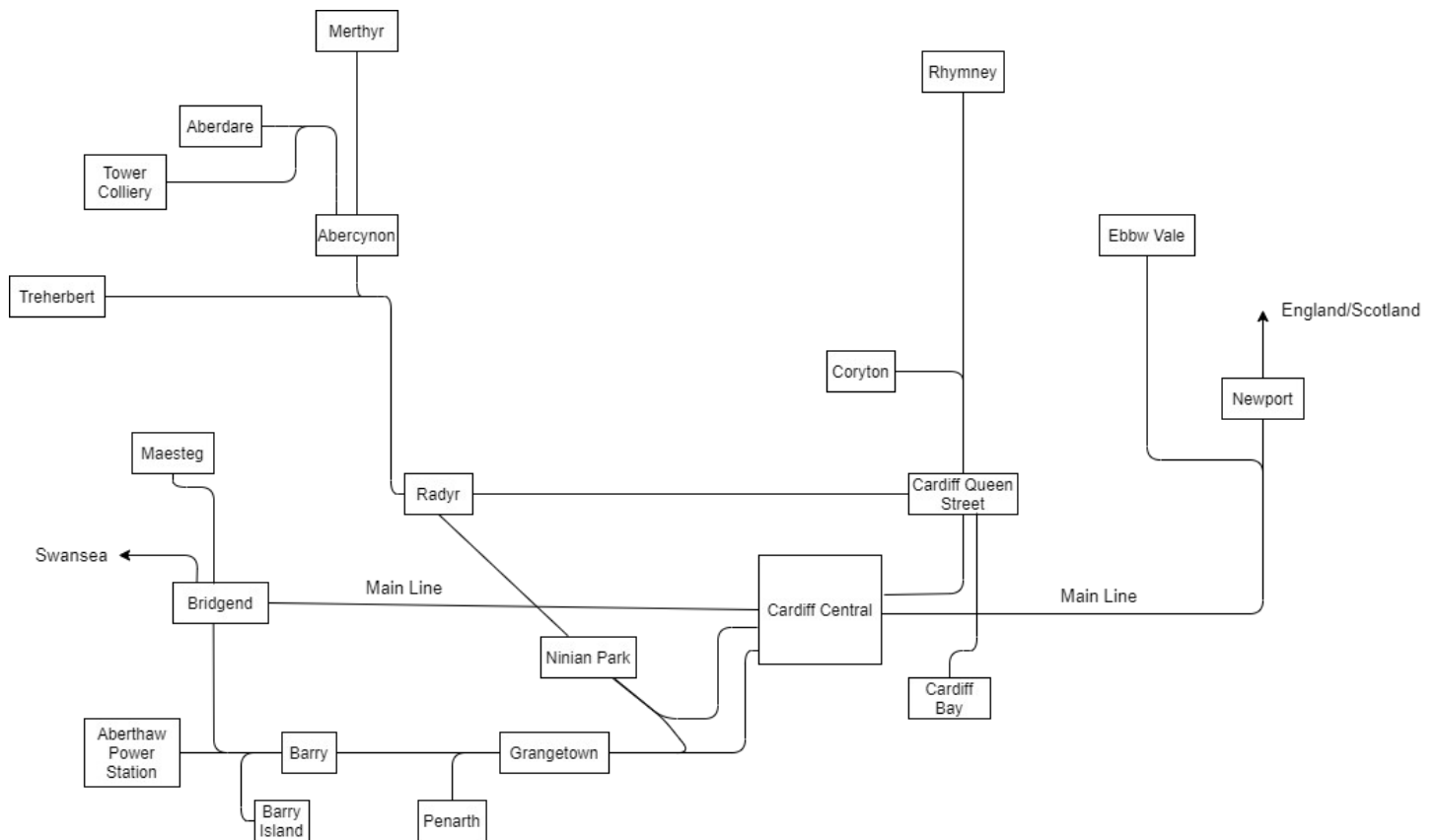
Coal trains should be routed via Ninian Park in order to avoid Cardiff Central.

On single track routes check for trains coming the other way and hold trains at crossing points when necessary, which is in most cases.

Feeder services from Cardiff Canton should be routed into Cardiff Central platforms as follows:

0D00   Platforms 3 or 4, preferably 4.
0T00   Platforms 3 or 4, preferably 4.
0F02   Platforms 3, 4, 6, 7 or 8, preferably 6 or 7 but not 8 because of the fouling risk.
0F03   Platforms 4, 6, 7 or 8, preferably 6 or 7 but not 8 because of the fouling risk.

Location Diagram

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