



CCE DEPARTMENT

CCE TRACK AND STRUCTURES REPORT

**ASSET MANAGEMENT OF THE BELLVIEW –
ROSSLARE STRAND LINE AFTER SERVICE
WITHDRAWAL**

CCE-QMS-AMT-901

ASSET MANAGEMENT OF THE BELLVIEW – ROSSLARE STRAND LINE AFTER SERVICE WITHDRAWAL

1. Introduction

This report outlines the planned maintenance and inspection activities to be undertaken on the Permanent Way following the planned withdrawal of rail services between Belview Port and Rosslare Strand.

The report provides details on specific activities to be carried out to maintain the Track, Structures and Signalling assets such that the line does not fall into disrepair or suffer from encroachment and that it receives a level of basic maintenance to those assets so that any future return of rail services can be accommodated.

2. Asset History

The Fishguard and Rosslare Railways & Harbour Co. (FRR + H Co) (Great Southern and Western and Great Western (England) joint) opened the line from Rosslare Strand to Waterford in 1906. The track consisted of 87lb bullhead rail laid in 45 foot lengths on timber sleepers. The signalling system was Electric Train Staff (ETS) with lower quadrant semaphore signals.

3. Track

Present

The service suspension will result in the section from Belview Port (79 miles 1320 yards) to Rosslare Strand (110 miles 880 yards) being out of regular use. This is 30.75 miles in length and consists of 6.2 miles of continuously welded track (CWR) and 24.55 of jointed track. The majority of this jointed track is original 87lb bull head rail dating from 1903 – 1906 in 45 foot lengths. The timber sleepers have been periodically replaced in a plan patching operation at the rate of about 1000 sleepers per year. The present situation (if passenger traffic continued) is that there is need to replace 26,400 sleepers on about 22.5 miles of this track as being close to life expired or relay the section with second-hand CWR.

Future

Following service suspension the line section will be declared an “Engineers siding” and the present general PSR of 40mph reduced to 25mph except where lower restrictions already apply (Barrow Bridge area).

An annual track inspection by engineer’s inspection car and annual spray train or road rail spray operation would be the minimum track movements into the future.

As timber sleepers deteriorate with age some spot replacement or insertion of gauge tie bars may be required in order to keep the line fit for these movements.

Should line re-instatement be required at a future date, a capital project to replace the track with second-hand CWR will be required.

4. Signalling

Present

The original ETS signalling is still in place from Bellview Port to 110mp where Greystones - Rosslare Europort mini CTC takes over. There is one intermediate Block Post at Wellingtonbridge.

Future

All semaphore signals be left in situ but taken out of use. All distant signals be set at caution (as in a fixed distant mode) all stop outer home, inner home, starters and advance starter signals be taken out of use by affixing an X on the signal arms.

The cabin at Wellingtonbridge be modified to switch out and secured against vandalism and the Engineer's siding operated by a manual token from Waterford Central to Rosslare Strand. The staff would be returned by road to Waterford Central on any train or on track machine exiting onto the Greystones - Rosslare Europort line at Rosslare Strand. Alternately the manual token could be entrusted to the full time care of the Permanent Way Inspector Wexford.

Trains would have to be released past colour light signal 569 from a signalman at Rosslare Strand in contact with the signalman at Greystones control cabin as per the present arrangement.

5. Controlled Level Crossings

Present

There are 11 white gate CX, 1 CCTV, and 1 OP* controlled crossing remaining on the section in question.

Future

The CCTV crossing XH16 Belview No. 1 at 79.1505 is best left operational. Cattle grids and road surface are good and will be maintained.

The white gate "CX" crossings are:

XH29 Rathunney at 87.1050
XH31 Burkestown at 88.350
XH39 Ballylannan at 92.1640 (controlled Wellingtonbridge)
XH41 Wellingtonbridge at 93.750 (controlled Wellingtonbridge)
XH42 Kilcavan No. 1 at 95.30
XH43 Kilcavan No. 2 at 95.600
XH50 Ballyfrory at 96.1510
XH55 Nicharee at 99.800
XH66 Bridgetown at 103.00
XM76 Moyglass at 104.1680
XH92 Grange Big at 110.830

The white gate crossings have timber barriers and lamps. The expected life of these when unattended would be 3 – 4 years for the timber and a few months for the lamps. The short life timber barriers could be replaced with aluminium barriers and no lamps as no engineers train movements will take place during darkness. Signals would remain in place as described earlier and ground frames mothballed.

XM96 Grange Big colour light would operate normally.

The engineer's train movements would be achieved by manually unlocking and locking gates.

The OP⁺ black gate crossing XH59 Munchtown at 101.0 will be secured across railway and opened in a similar way.

The signal department would oil gate locks and check operation before each planned movement (1-2 man days work)

Level Crossing road surfaces have recently been repaired and are good. The flangeways will be maintained and road potholes filled when reported or found following the proposed annual inspection.

6. Points and Crossings – Present and Future

The turnout between the running line and Bellview Port at 76.1340 is power operated from Waterford Central and should remain so for future.

The traps at each side of the Barrow Bridge will remain interconnected with the bridge control and signalling while the Barrow Bridge cabin is manned.

The 5 turnouts and 1 traps at Wellingtonbridge which are controlled by Wellingtonbridge cabin will remain except for the turnout at the Rosslare end of the loop which will be removed for use elsewhere. This will be replaced with a plain line panel. The remaining 2 turnouts off the through running line will be scotched, clipped and locked in normal position.

The turnout at Rosslare Strand is power operated and interlocked with Grange Big level crossing and its operation is controlled from Greystones and will remain unchanged.

7. User Operated Level Crossings

Present

There are 32 user operated level crossings remaining in the affected section

Of these 8 are disused, 9 have cattle regularly crossing, and 3 access forestry

The remaining 12 are mixed use tillage and access

Disused crossings are

XH18, XH38, XH46, XH68, XH69, XH70, XH71 and XH74

The 24 crossings in use have good surfaces, slopes, cattle grids, and fencing, operating gates and signage in place.

Future

Previous experience with other rarely used lines is that gate closing discipline often ceases and users sometimes erect their own barriers across the railway track. Those barriers range from an electric fence to a piled vegetation barrier to clay barrier and sometimes a block wall.

The removal of these barriers to permit engineers trains and avoid the railway becoming a grazing area for animals will be achieved by provision of transition openings at each of these 24 locations at a cost of about €500 each.

A transition opening consists of a pivoting fence with a fixed and opening bracket at the opening end. The opening fence consists of top and bottom barbed wire and coloured fabric usually polypropylene between the wires. These can be easily opened and closed by the train crew.

8. Bridges

Present

The section in question has 3 major bridges:

UBH140	Barrow Bridge	15 span
UBH171	Taylorstown Viaduct	7 span
UBH193	Duncorrick Viaduct	3 span

There are 3 double span bridges

Of the total of 194 bridges 56 are steel bridges, 12 are masonry bridges and there are 96 culverts. Rail/public road bridges number 30 and rail over water number 31.

UBH140 Barrow Bridge has had major work carried out in the last 10 years. The remaining planned structural repair work over 5 years would have totalled about €600,000.

There is concern about UBH171 which is due a thorough inspection this year.

The other bridges of concern are

UBH162 – corrosion

UBH196, UBH204, UBH210 and UBH216 are all listed for painting in the next 5 years.

Future

All steel bridges that intersect public roads must continue to be inspected in the 2 year cycle and represents a high % of the total so all should continue to be inspected.

The 2 year cycle of bridge inspection will continue most likely using the inspection car and the road rail bridge inspection basket as required with full daylight working hours.

The 4 bridges in the section currently listed for scour inspection are

UBH140	Barrow Bridge	81.1100
UBH147		83.938
UBH180		93.1720
UBH198		101.340

These will continue to receive inspections as dictated by the Structural Engineer as if the line was operating normally. The list is being monitored by Dr. McKeogh of UCC who may add or subtract bridges in the future.

In summary there will be no change in inspection or maintenance regimes.

The cleaning of culverts to prevent flooding would continue as before.

9. Barrow Bridge Operation

Present

The cabin is presently manned 24 hours per day 7 days per week.

The signalmen open and close the bridge when shipping bound to or from New Ross offers and train movements are blocked for this operation. They also switch on the navigation lights and replace bulbs. Shipping movements are monitored by signalmen for shipping strikes on the structure.

The present bridge latching operation is insufficient to permanently lock the bridge in an "open to shipping" mode.

Future

The manning of the bridge could be reduced to match the shifts of the 2 pilotmen from New Ross Harbour Commission who only bring commercial shipping through at high tide. Possible strikes from tall masts of pleasure craft would not be expected to damage the bridge. The SET Department would continue their 4 man day per week maintenance regime. Trains could still cross.

CCTV will be installed on the bridge initiated about 1km up and down stream by commercial vessels and connected to the fibre optic network for monitoring movements and recording strikes in either Athlone or Mallow CCTV crossing control centres.

The signal cabin would have to be secured against vandalism.

10. Tunnel

Present

There is one tunnel at Snowhill at 81.836 which has some water ingress to sides but no wall hollows on last inspection.

Future

This will be thoroughly inspected by technical staff from a raised platform when service is suspended. Further inspections frequencies will be considered as required on analysing the results of this inspection.

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11. Cuttings and Embankments

There are no hot spots or failure history in the section in question other than the 500 yards of sea wall starting at 81mls 300 yards which needs monitoring and maintenance.

Future

The annual inspection car run will monitor any significant problems here and the patrol ganger will still walk to 83mp and monitor the sea wall at 81.300 after every weather event.

12. Drainage

There has been little problem history apart from the 82.440 area last November.

Future

The culverts to be checked and kept clean and any reported flooding or land owner abuse acted on. Patrolling to 83 will continue after weather events.

The annual inspection car run will also monitor this.

13. Fencing

A significant amount of fencing has been replaced over the recent years. The original tin whistle type fence is almost gone. There have been very few animal incursions onto the line in recent years. The dry stone walling sections are good.

Future

Fencing will be repaired as required and as observed on inspection runs.

14. Adjoining Lands

At present the boundaries are intact and no developments detrimental to the railway have occurred.

Future

This is an area of concern as suspensions of train services have on occasion been treated by land owners as an opportunity for dumping, encroachment and discharging liquids onto the railway.

A letter is to be sent to all adjoining landowners stating that boundaries will be maintained and inspections will continue. The inspections would check boundaries and vigorous action will ensue if the railway is encroached or harmed. All inspections undertaken would be on alert for these type of instances.

15. Vegetation Cutting

In 2009 the hedgecutting costs for the section concerned amounted to €43,000.

Future

A vigorous hedgecutting programme be undertaken with once every 2 years.

16. Tree Cutting

The only perceived problem area for trees is 102.880 to 103 (Bridgetown) where wheelslip has occurred. There have been very few instances of trees falling across the line in recent years.

Future

The annual inspection car run will have an operative with a chain saw to remove any fallen trees from the track.

17. Weed Spray

The 2010 weedspray run was poor with weeds showing significantly again between 81.880 to 86, and 105.440 – 1320, and in general to a lesser degree in the remaining track section.

Future

An annual spray with spray set as wide as possible will be undertaken and reviewed each year by inspection.

18. Scrap

Scrap remains in a few locations notably the Munchtown level crossing area.

Future

All will be gathered and removed following service suspension.

19. Signage

Present signage at stations, bridges, mileposts and level crossings is good.

Future

This will be checked and maintained as required.

20. Summary

Operational Change

The section in question will be declared an “Engineers siding” with a general PSR of 25mph and no after dark movements. It will be operated by manual token stored in Central Cabin Waterford or retained by the Permanent Way Inspector Wexford.

All distant semaphore signals will be set at caution and all home, and stop signals will have “X out of use” signs fixed on arms.

The powered turnouts at Belview and Rosslare Strand and associated signalling will remain operational. Wellingtonbridge cabin will be switched out and running line turnouts at Wellingtonbridge scotched, clipped and locked.

White gate level crossings (CX) and the OP* crossing will be de-manned and secured across the railway. The CCTV level crossing at Belview will remain operational.

User worked level crossings will remain in situ.

Landowners will be notified of service suspension and future boundary inspections.

Future Inspections

Bridges will be inspected every 2 years as per standard. Scour inspections will continue as per standard.

Snowhill tunnel will be thoroughly inspected after service suspension and observed annually.

An annual track inspection car run will monitor the track drainage, formation, adjoining land developments, fencing, level crossings, Snowhill tunnel, and security of buildings and remove trees fallen across the line.

Other repositioning movements by "on track machines" or engineering trains may take place with feedback on any problems encountered.

Preservation

- A two year hedgecutting to be carried out.
- An annual spray train run to be conducted.
- The signal cabin and buildings at Wellingtonbridge to be secured against vandalism.
- Road surfaces at level crossings to have flangeways preserved and pot holes filled as also on overbridges.
- The 24 active user worked level crossings to have transition openings fitted across the track.
- Fencing, Drainage and Signage will be repaired, rodded and replaced as required.
- Scrap will be removed following suspension of service.

Barrow Bridge De-manning

CCTV camera initiation linked to Athlone or Mallow control centres will be installed. The cabin will be secured against vandalism.