

Western Gateway Sub-national Transport Body

Board Meeting

Paper C

Date **17 September 2025**

Title of report: **Avonmouth Rail Freight Terminal study**

Purpose of report: **To update the Board on the Avonmouth Rail Freight Terminal study and set out next steps**

Recommendations:

The members of the Board are recommended to:

- I. Approve the Avonmouth Rail Freight Terminal study
- II. Approve the next steps as set out in section 3.2

1. Background

- 1.1 The Avonmouth Rail Freight Terminal Study was commissioned by the Western Gateway Sub-national Transport Body (STB). Undertaken by the Polaris Consultancy Group it has assessed the potential for developing a Rail Freight Terminal (RFT) at Avonmouth. The study considered market demand, technical and environmental feasibility, stakeholder views, financial and economic viability and alignment with regional and national freight policies.

2. Main findings

- 2.1 The comprehensive report demonstrates that Avonmouth is well positioned to host a terminal of strategic significance. It advises the success of such a scheme will depend on carefully navigating operational constraints, aligning with stakeholder priorities and securing both public and private investment. The following sections provide more detail. The full report following any minor amendments will be placed on the [Western Gateway website](#).
- 2.2 Evidence from comparable rail freight terminals reinforces the viability of the Avonmouth proposal. These examples, shown below, illustrate the potential for Avonmouth to replicate similar success, particularly if infrastructure is delivered ahead of demand.
- iPort Doncaster has exceeded expectations in train volumes and is undergoing expansion.

- East Midlands Gateway has become a key national hub with strong modal shift outcomes.
- Northampton Gateway has demonstrated rapid uptake and operational success shortly after opening.

Sites Assessment

- 2.3 Eight potential sites within Avonmouth and Portbury were assessed. Site A, adjacent to the SUEZ Severnside Energy Recovery Centre, emerged as the preferred option due to its proximity to the distribution centre cluster, existing rail access and available space. Challenges include complex rail access requiring train reversals and uncertainties around land ownership. Dockside sites within Avonmouth Port present viable alternatives but depend heavily on the port's strategic intentions, including the CO₂ capture and shipping hub (7CO₂) project.
- 2.4 Site A can physically accommodate a terminal handling up to six intermodal services per day, with trains of up to 600m length. Road access is strong, particularly when the new M49 junction opens, although rail access is operationally complex, requiring two reversals via St Andrew's Road and Severn Beach. While this is workable, it adds costs and time. Environmental risks, including flood management and ecological sensitivities, are manageable within existing mitigation frameworks.

Demand and Market Analysis

- 2.5 The demand assessment shows strong potential for both maritime and domestic intermodal traffic. Avonmouth's position within a dense logistics cluster and its growing warehousing footprint (1.5 million square metres, with major operators such as Amazon, Tesco, Lidl and Panattoni) creates a significant customer base. The opening of East West Rail in 2025 will transform connectivity, enabling competitive services to the East Midlands "Golden Triangle" of logistics. Stakeholders indicated interest in services, but certainty of base traffic flows is critical.

Operational and Technical Feasibility

- 2.6 A schematic design confirms operational feasibility, with layouts that balance rail efficiency, container storage and HGV flows. Technical feasibility is underpinned by Network Rail confirmation that the route is cleared to W12 loading gauge, removing a major historic constraint. Capacity analysis shows that with timetable adjustments, up to 12 intermodal trains per day (six in bound, six outbound) could be accommodated alongside passenger services.

Environment and Planning Feasibility

- 2.7 The Avonmouth/Severnside area is environmentally sensitive, with proximity to the Severn Estuary Special Protection Area, Special Area of Conservation and Ramsar sites, as well as historic drainage rhines. Precedents, however, show

that mitigation is possible (e.g., flood defence schemes and SUEZ development). A Preliminary Environmental Impact Assessment (PEIA) indicates that planning risks are manageable. Only a detailed planning application will be required; no nationally significant infrastructure designation is necessary.

Financial and Economic Appraisal

- 2.8 The report stresses that standalone intermodal terminals rarely achieve profitability without integration into wider logistics developments. Nevertheless, Avonmouth's scale and location offer strong prospects if a FOC or major operator takes a long-term view. Capital costs remain significant. The capital cost of the rail handling area is estimated to be £8.7m, with the remainder of the terminal including road and rail access, gates, fences and buildings estimated to be £4.5 million leading to a total estimated capital cost of £13.2 million. This is still lower than for comparable greenfield sites, due to existing connections. Economic appraisal shows wider benefits in congestion relief, carbon reduction and regional competitiveness.
- 2.9 It should be noted that some rail network improvements would be needed for an efficient operation including resignalling and an extended run round loop. These changes could be considered as steps towards the infrastructure required to improve the frequency of passenger services on the Severn Beach Line rather than standalone rail freight terminal requirements. A very rough estimate would be that capital costs could be between £10 million and £20 million for these works.

Risk Assessment

- 2.10 Key risks include uncertain land availability, operational inefficiencies from train reversals, competition for paths with passenger services and stakeholder misalignment. The report states these risks are significant but manageable with proactive mitigation.

3. Conclusions and Next steps

- 3.1 The feasibility study confirms that Avonmouth has both the demand base and strategic position to support a Rail Freight Terminal. Site A, adjacent to SUEZ, is the preferred option, though port-based alternatives must be kept under consideration. Technical feasibility is confirmed, environmental risks are manageable and economic benefits are compelling. The terminal represents a pivotal opportunity to decarbonise freight, strengthen supply chains and unlock regional economic growth. Successful delivery, however, depends on securing private sector commitment, aligning stakeholder interests and resolving operational complexities.
- 3.2 The next steps are the development of a robust business case, a clear understanding of the delivery model and the progression of the scheme design. The following key areas require focused action:

- Secure landowner consent
- Address key operational questions
- Develop the project business case
- Agree the delivery model
- Agree a planning strategy
- Agree a scheme design
- Continue to engage stakeholders

3.3 The Board is asked to approve further development of the business case as recommended in section 3.2. Initial funding will be from the Freight budget for 2025/26. This will be used to scope out the full extent of the actions listed in section 3.2 and their cost. Funding partners will be sought from amongst the key stakeholders.

4. Consultation, communication and engagement

4.1 An extensive range of stakeholders including Network Rail, SUEZ, Bristol Port, the West of England Combined Authority and major Freight Operating Companies (FOCs) all expressed strong support for an RFT at Avonmouth, recognising its potential to drive decarbonisation, improve connectivity and strengthen the logistics cluster. Concerns, however, were raised about the balance with passenger rail services, local traffic impact and the commercial viability of a standalone terminal. Businesses in the logistics sector remain focused on cost and operational efficiency, rather than decarbonisation, though this is expected to change over time. All the stakeholder contributions and commitment are greatly appreciated.

5. Equalities Implications

5.1 No adverse impact on any protected groups. With the transfer of more freight from road to rail there are potential carbon reductions and air quality improvements.

6. Legal considerations

6.1 The Western Gateway STB remains an informal non-statutory partnership.

7. Financial considerations

7.1 Initial funding for continuing the business case development for the Avonmouth Rail Freight Terminal will be from the remaining Freight budget for 2025/26. Additional funding partners will be sought from amongst the key stakeholders.

8. Recommendations

8.1 The Board is asked to approve the Avonmouth Rail Freight Terminal study and the next steps as set out in section 3.2

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