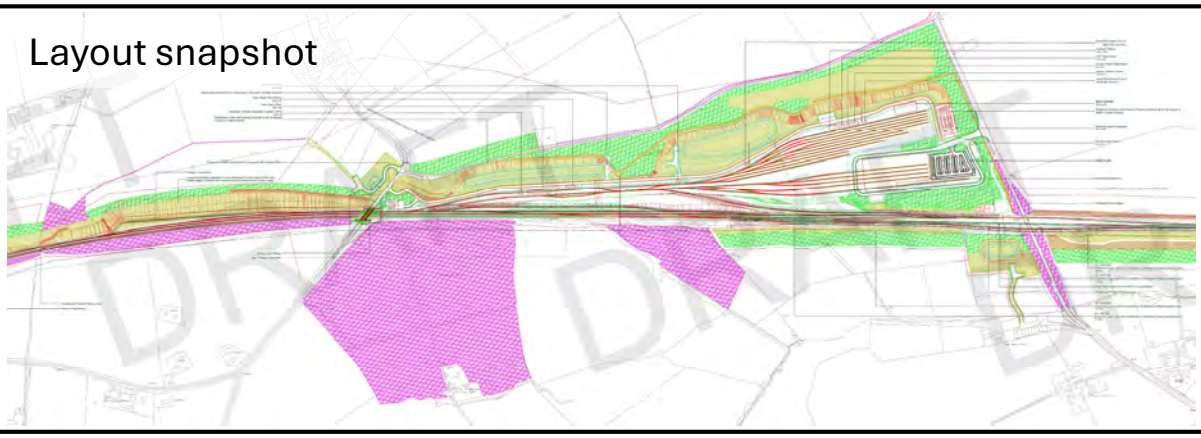
Bletchley West Train Maintenance Depot and Passing Loops - Option 1 of 3 - Eastern Orientation - Information paper

DRAFT FOR DISCUSSION

All figures quoted are estimates only based on desktop study and subject to survey / detailed design development

Layout snapshot



Option Description

Option 1 locates both the maintenance building and stabling sidings at the eastern end of the site adjacent to Whaddon Road. A reception track would connect the depot to the existing mainline to the west, allowing direct access to the stabling sidings and maintenance building for trains entering and exiting from and to the Oxford direction. Trains entering from the Cambridge direction would need to do so via a head-shunt located at the western end of the site. The eastbound freight passing loop is located to the north of the mainline, passing under Swan's Way and Salden Lane, with both bridges proposed to be replaced with wider decks to accommodate the additional lines underneath. The westbound freight passing loop is located to the south of the mainline passing over Trenches underpass, which would require an extension, and under Whaddon Road via the existing vacant archway, requiring minor structural reinforcement.

Roads, Bridges and Public Rights of Way

Swan's Way: The road bridge is proposed to be replaced on its existing alignment with traffic diverted along other roads during construction.

Salden Lane: The bridge is proposed to be replaced on its existing alignment with access to Lower Salden Farm maintained via a temporary road from Newton Approach/Whaddon Road during construction. An offline replacement of Salden Lane bridge (as presented in Options 2 & 3) is also a feasible solution for Option 1 to mitigate farm access and NCN51 diversions.

Whaddon Road: This option does not require the Whaddon Road bridge to be replaced.

Trenches Underpass: The underpass is proposed to be extended along its existing alignment. During construction pedestrians would be diverted to an alternative route.

NCN 51 Byway / Weasel lane: This option retains the existing alignment of the byway but would require the route to be temporarily diverted during the construction works to replace Salden Lane bridge.

Utility Impacts

Utilities along Salden Lane bridge: There are three existing services (water, power and telecoms) which cross Salden Lane bridge and would be impacted. Under Option 1, those utilities would be diverted under the railway via new under-track crossings, allowing the bridge to be replaced without disrupting these services.

High-pressure Gas: Diversion of the asset is assumed not to be required for all three options. For all three options, the high-pressure gas main running parallel to the railway to the south would be protected during construction and operation of the realigned railway.

Mitigation planting

A mixture of woodland, grassland and scrubland is proposed within and around the depot and loops to provide visual screening, replace lost woodland and increase biodiversity across the site. Option 1requires full removal of two parcels of woodland, both designated as priority habitat and Local Wildlife Sites:

i. The woodland parcel to the north of the mainline, south of Lower Salden Farm (full removal);
ii. The woodland parcel to the north of the mainline, west of Whaddon Road (full removal).

These woodland parcels are notable elements in the landscape and the removal will open up views of the proposed depot site until proposed mitigation planting has matured.

Where receptors are particularly close to the site, larger woodland planting blocks are proposed. Planting of semi-mature trees could be considered but would need an enhanced establishment maintenance programme.

Landscaping

Land volume estimates: Cut: 514,670m^3 | Fill: 193,810m^3 | Net: 320,860m^3 (Cut)

Given the need for a level depot site and with existing site topology rising from south to north and from east to west, this option requires a level of landscape cutting and fill to accommodate the maintenance shed and stabling yard at the eastern end of the site.

Retaining walls: Total length: 1,734m. This option proposes a retaining wall along the entire length (1,570m) of the westbound passing loop to the south of the railway to protect the existing high-pressure gas main with a further 164m proposed directly north of the railway within the main depot site. The wall height would vary as required but the maximum height is expected to be approximately 3.5m high.

Drainage and outfalls

Drainage of surface water: For all options, surface water is collected from across the site via the drainage system and conveyed southeast to the outfall near Whaddon road, mimicking the existing rainwater run-off. The proposed drainage system for Option 1 requires four ponds, two swales and a total of five culverts with a combined estimated attenuation volume 23,809m^3.

Flood risk: Site does not fall within any Environment Agency (EA) Flood Zones (FZ) but it does have isolated areas of ponding and a number of small flow routes within as shown on EA Flooding from Surface Water maps. Areas are not extensive, however runoff from the site and rerouting of flows from the north to under the existing railway will be required. Flood risk can be managed through the drainage design which would route flows to drainage basins, around the site or under the site through the existing culverts under the existing railway.

Foul water storage and discharge: The storage of foul water and options for discharge are still under consideration for all three options. For all options, engagement with utility companies and local authorities would inform an agreed foul water strategy.

Depot Operations

It is currently assumed that most train movements to and from the depot will be in the Cambridge direction. Option 1, with the reception track leading west, introduces operational inefficiencies for eastbound movements by requiring additional shunt moves to reach the stabling sidings. This option does provide alternative points for access from the east which aids in the sites overall operational resilience.