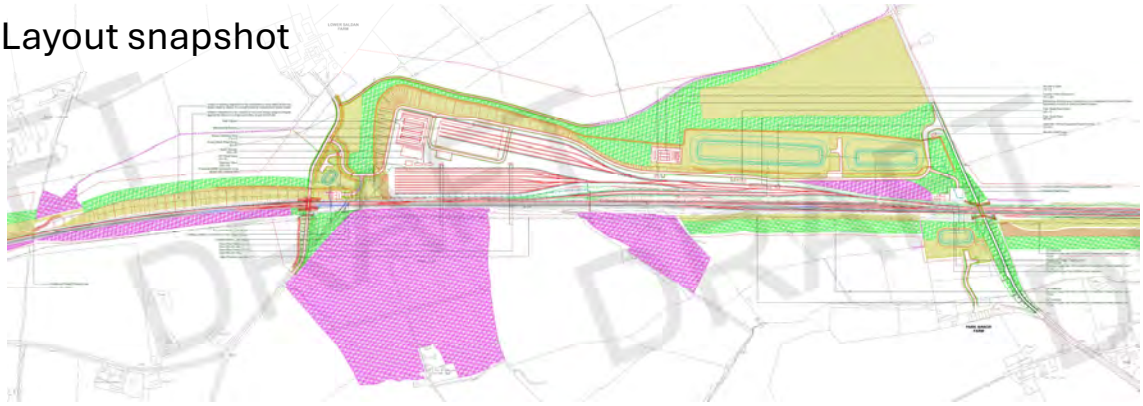
# Bletchley West Train Maintenance Depot and Passing Loops - Option 2 of 3 - Western Orientation - Information paper

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 2 locates both the maintenance building and stabling sidings at the western end of the site adjacent to Salden Lane. A reception track connects the depot to the existing mainline to the east to allow direct access to the stabling sidings and maintenance building for trains entering from the Cambridge direction. Trains entering from the Oxford direction would need to do so via a turnback manoeuvre on the reception track. The reception track would pass beneath Newton Approach/ Whaddon Road requiring the bridge deck to be replaced. 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 would be located to the south of the mainline passing over Trenches underpass, which would require an extension, and Whaddon Road were the bridge would need to be replaced with a widened deck.

**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 road bridge is proposed to be replaced by a new structure located roughly 100m west of the existing alignment. The construction works would be phased to maintain continuous access to Lower Salden Farm and avoid diversion of the NCN 51 byway.

**Whaddon Road:** The road bridge is proposed to be replaced on its existing alignment with traffic diverted along other roads during construction. The works would be phased separately to the replacement of the road bridge at Swan's way to avoid simulations closure of both roads.

**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 would require diversion of the byway around the proposed depot stabling and maintenance shed. This would be phased to avoid closure of the route

**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. For Option 2, those utilities would remain in the existing bridge whilst provision for the utilities is provided in the new offline bridge. Services would then be switched over to utilities in the new bridge.

**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 at 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. This option requires full removal of one parcel of woodland and partial removal of another, with 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 (partial 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: 571,880m$^3$ | Fill: 44,690m$^3$ | Net: 527,190m$^3$ (Cut)

Given the need for a level depot site and with the existing site topology rising from south to north and from east to west, Option 2 requires a higher level of landscape cutting to accommodate the maintenance building and stabling yard at the western end of the site.

**Retaining walls:** Total length: 1,207m. Option 2 proposes a retaining wall along an 850m portion of the westbound passing loop to the south of the railway east of Whaddon Road. A further 357m length of retaining wall is proposed directly north of the railway adjacent to Salden Place to accommodate the depot reception track. The wall height would vary as required but the maximum height is expected to be approximately 3.5m high.

**Drainage and outfalls**

**Drainage of groundwater -** 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 2 requires four ponds, two swales and a total of 12 culverts with a combined estimated attenuation volume 27,933m$^3$.

**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 routing 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 most train movements to and from the depot will be in the Cambridge direction. Option 2, with the reception track leading east, has a clear operational efficiency benefit with trains from the Cambridge direction able to enter the stabling yard directly. Whilst Option 2 currently only has one entry point from the east, which introduces resilience risk, further entry points and a western head shunt would be feasible and would be considered in any further design were this option progressed.