

**East Midlands Gateway
Phase 2 (EMG2)**

Document DCO 6.13E/MCO 6.13E

ENVIRONMENTAL STATEMENT

Volume 2 Technical Appendices

Appendix 13E

Lockington Brook Flood Assets

July 2025

13

The East Midlands Gateway Phase 2
and Highway Order 202X and The East Midlands Gateway
Rail Freight and Highway (Amendment) Order 202X

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Job No. 220500	Doc No. EMG2-BWB-ZZ-XX-T-W_0008	Rev. P02	Page Page 1
Project East Midlands Gateway Phase 2		Date Prepared 19/03/25	Prepared by Robin Green
Title A Review of the Lockington Brook Flood Assets at the A50 and M1			Authorised by Claire Gardner

Introduction

This note has been prepared to provide further information in respect to comments raised in the Environment Agency's (EA) scoping opinion of the proposed East Midlands Gateway Phase 2 scheme, specifically comments related to EA Flood Assets within the vicinity of the M1 and A50 slip roads.

In the returned scoping opinion, the EA state: "It is important to note that the northern section of the red line boundary intersects with flood assets for a main river. These assets should be scoped in for further assessment within the chapter on flood risk. We will require a pre-works and post works survey of these assets, with remediation of defects identified (e.g., assets: 168567, 170259, 168745, 182552, 167499, 96439)".

The referenced assets are located within **Figure 1** below. Assets 168567, 170259, 182551, 182552, 167499 and 96439 are classified as 'natural high ground' – i.e.: river banks. Assets 168745 and 168744 are classified as 'simple culverts'.

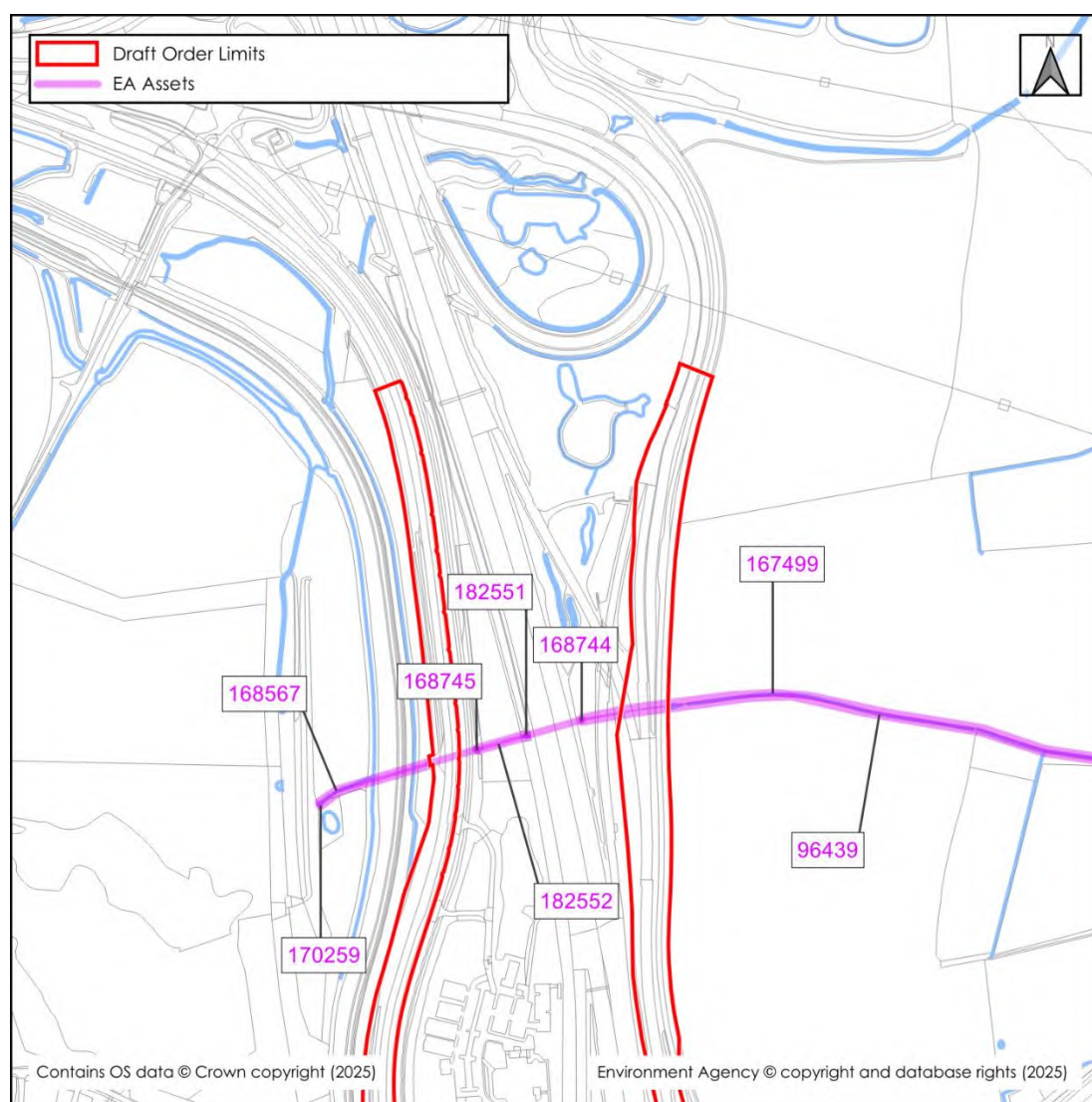


Figure 1 – EA Flood Asset Locations

The assets are understood to be associated with the Lockington Brook Main River – as illustrated with **Figure 2**.

Job No. 220500	Doc No. EMG2-BWB-ZZ-XX-T-W_0008	Rev. P02	Page Page 2
Project East Midlands Gateway Phase 2		Date Prepared 19/03/25	Prepared by Robin Green
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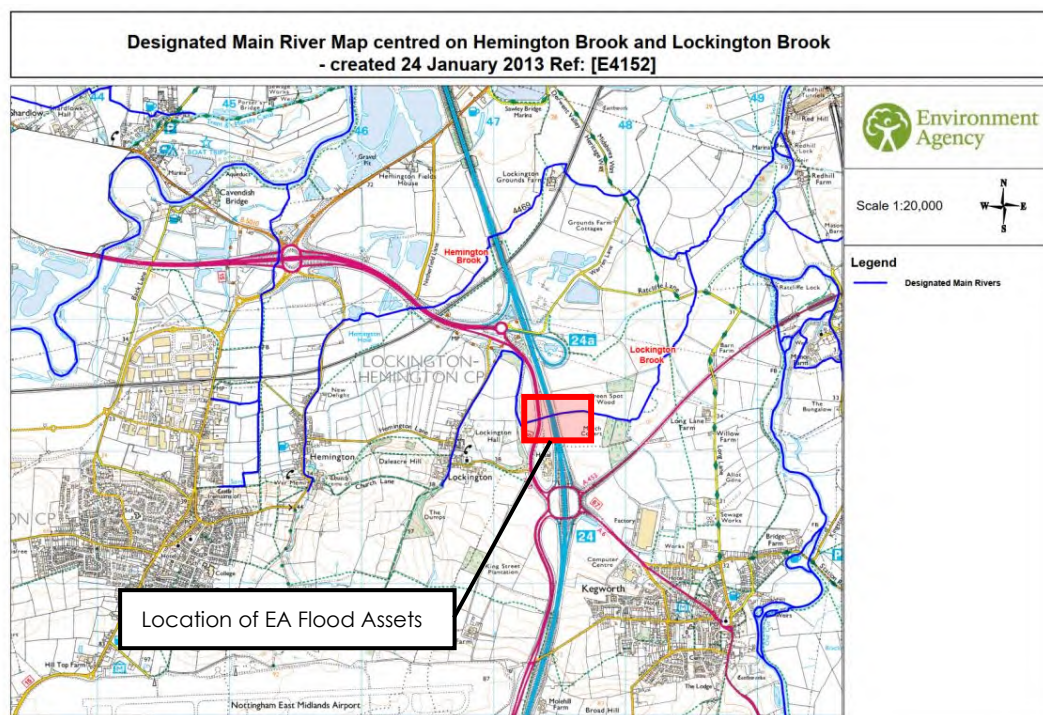


Figure 2 – EA Main River Map (2013) Illustrating the Assumed Connectivity of the Lockington Brook

However, the route of the Lockington Brook was never through these assets. Inspection and dye tracing undertaken in 2014 for the first phase of EMG identified that the Brook passes beneath the M1 and A50 slip road 520m further to the north – as shown within **Figure 3** below. The dye testing plan accompanies this note (ref: NTH/209/W45).

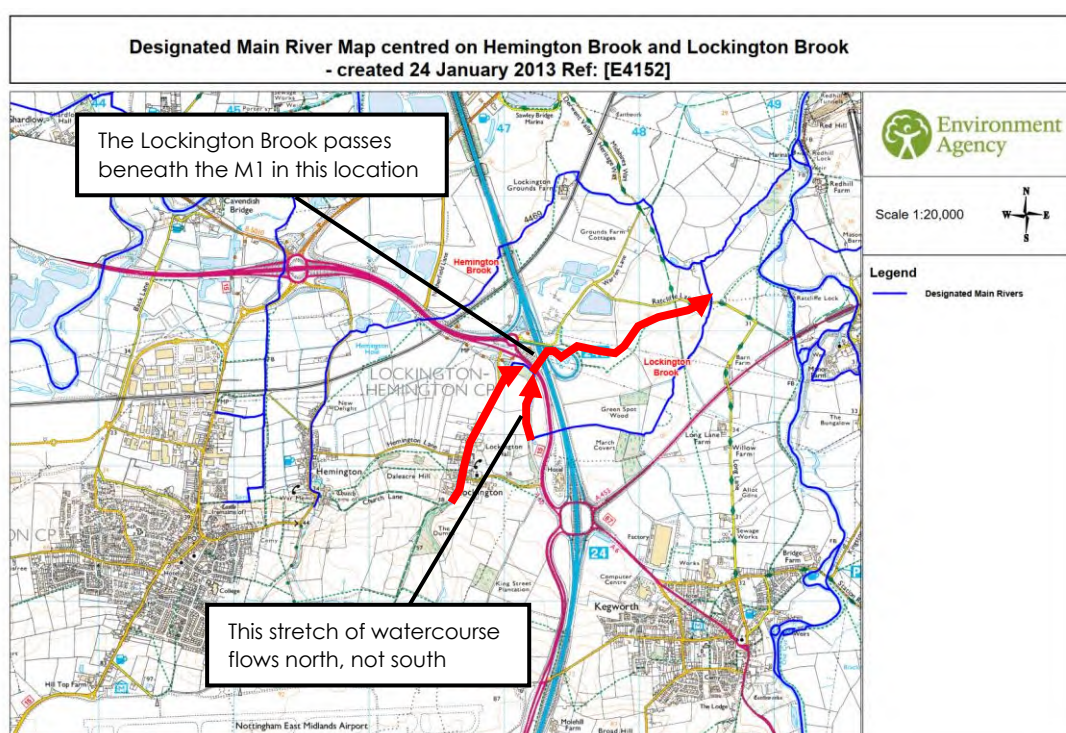


Figure 3 – EA Main River Map Mark-Up with Actual Connectivity of Lockington Brook confirmed in 2014

Job No. 220500	Doc No. EMG2-BWB-ZZ-XX-T-W_0008	Rev. P02	Page Page 3
Project East Midlands Gateway Phase 2		Date Prepared 19/03/25	Prepared by Robin Green
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The actual watercourse connectivity from 2014, prior to construction of the EMG1 Rail Freight Terminal, is shown in **Figure 4**. Please note that this is overlain on historical Ordnance Survey data from 2014. No evidence of the channel "182551 | 182552" was ever observed, instead culvert "168745" was thought to extend to meet the inlet of culvert "168744".

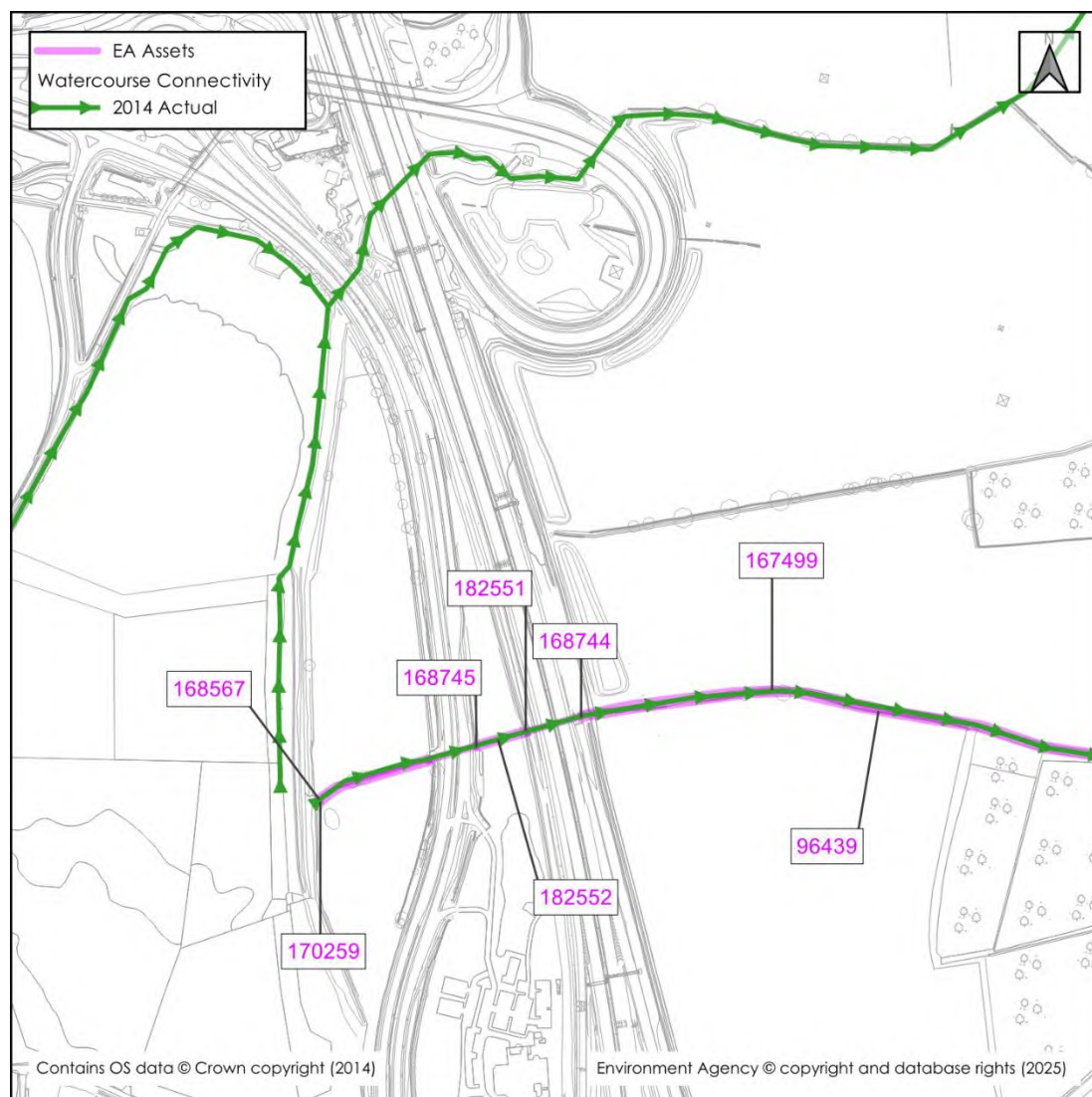


Figure 4 –2013 actual connectivity of the Lockington Brook

As the Lockington Brook did not flow through this reach, it is believed that it was incorrectly identified as Main River and categorised as EA flood assets. The actual route of the Lockington Brook, located 520m to the north, should have been categorised as Main River.

Job No. 220500	Doc No. EMG2-BWB-ZZ-XX-T-W_0008	Rev. P02	Page Page 4
Project East Midlands Gateway Phase 2		Date Prepared 19/03/25	Prepared by Robin Green
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EMG1 Rail Freight Terminal Alterations & Present-Day Connectivity

As part of the formation of the EMG1 rail terminal a number of alterations were made to the local watercourse and highway drainage. In summary the following changes were implemented in the location of the identified EA flood assets:

- The minor channel associated with "168667|170259" was diverted to flow northwards towards the Lockington Brook.
- The inlet to culvert "168745" on the western side of the A50 was covered, an 'open' inlet to the culvert no longer exists.
- Culvert "168744" was extended downstream to allow the new slip road between the A50 and junction 24 of the M1 to be created above.

The present-day channel connectivity is illustrated within **Figure 5**, and this is reflected in the EA's own hydraulic model of the Lockington Brook, as shown in **Figure 6**.

A site visit was undertaken on 19/03/2025 to capture photographic evidence of the hydrological feature on the alignment of the mapped EA Flood Assets; the observations are recorded on the plan that accompanies this note, ref: **EMG2-BWB-GEN-XX-SK-W-02**.

Job No. 220500	Doc No. EMG2-BWB-ZZ-XX-T-W_0008	Rev. P02	Page Page 5
Project East Midlands Gateway Phase 2		Date Prepared 19/03/25	Prepared by Robin Green
Title A Review of the Lockington Brook Flood Assets at the A50 and M1			Authorised by Claire Gardner

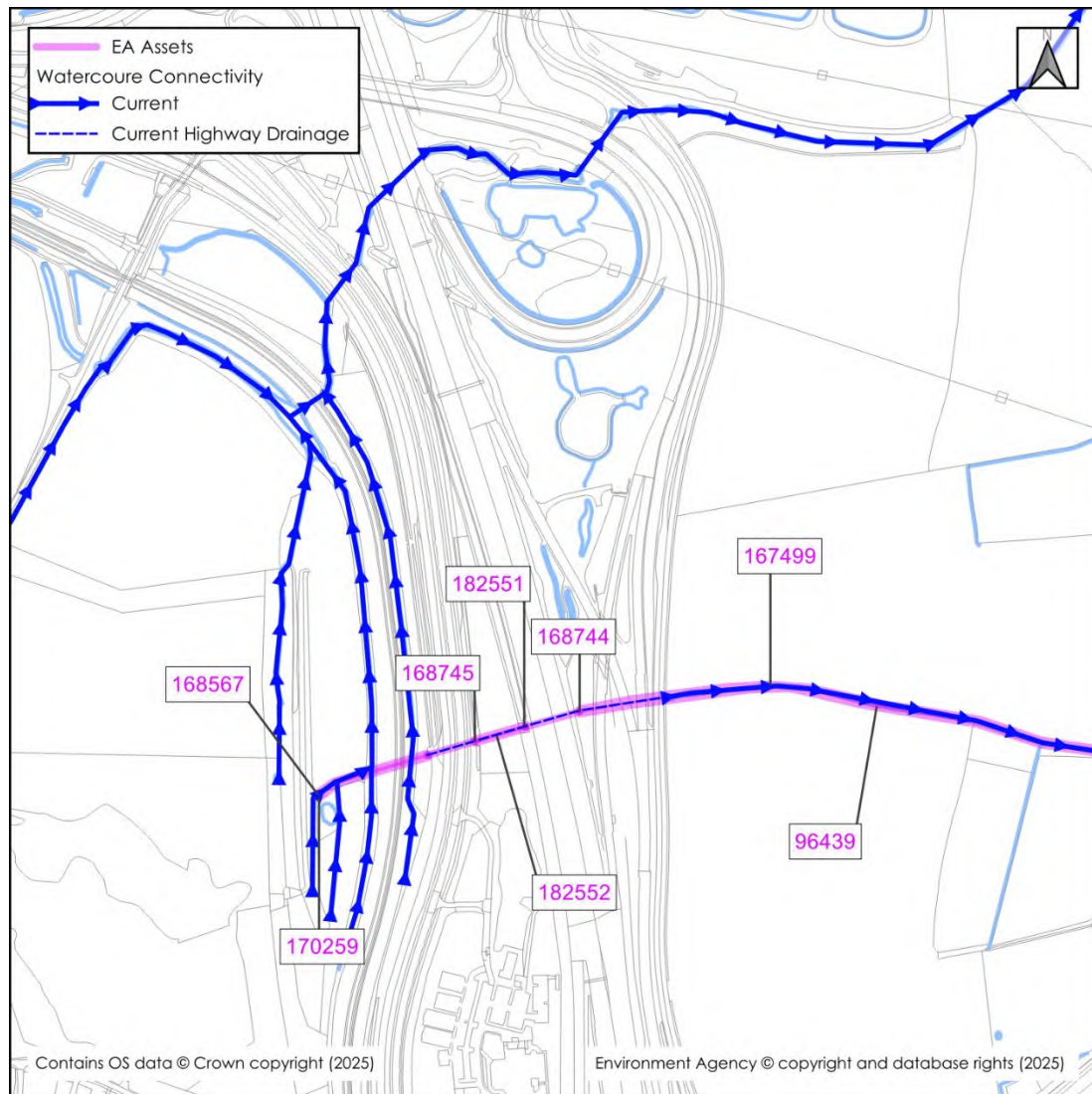


Figure 5 – Current Connectivity of the Lockington Brook

Job No. 220500	Doc No. EMG2-BWB-ZZ-XX-T-W_0008	Rev. P02	Page Page 6
Project East Midlands Gateway Phase 2		Date Prepared 19/03/25	Prepared by Robin Green
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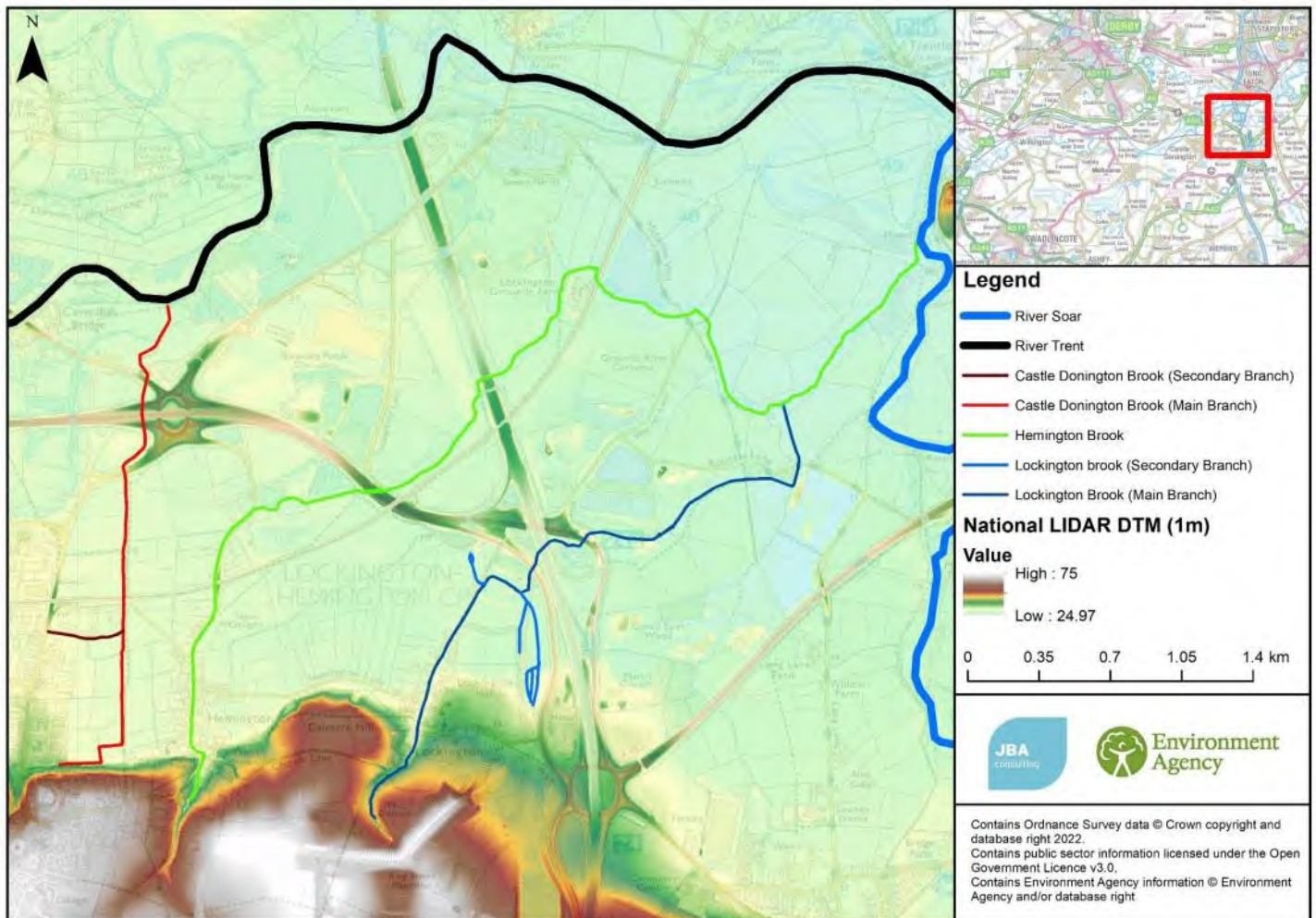
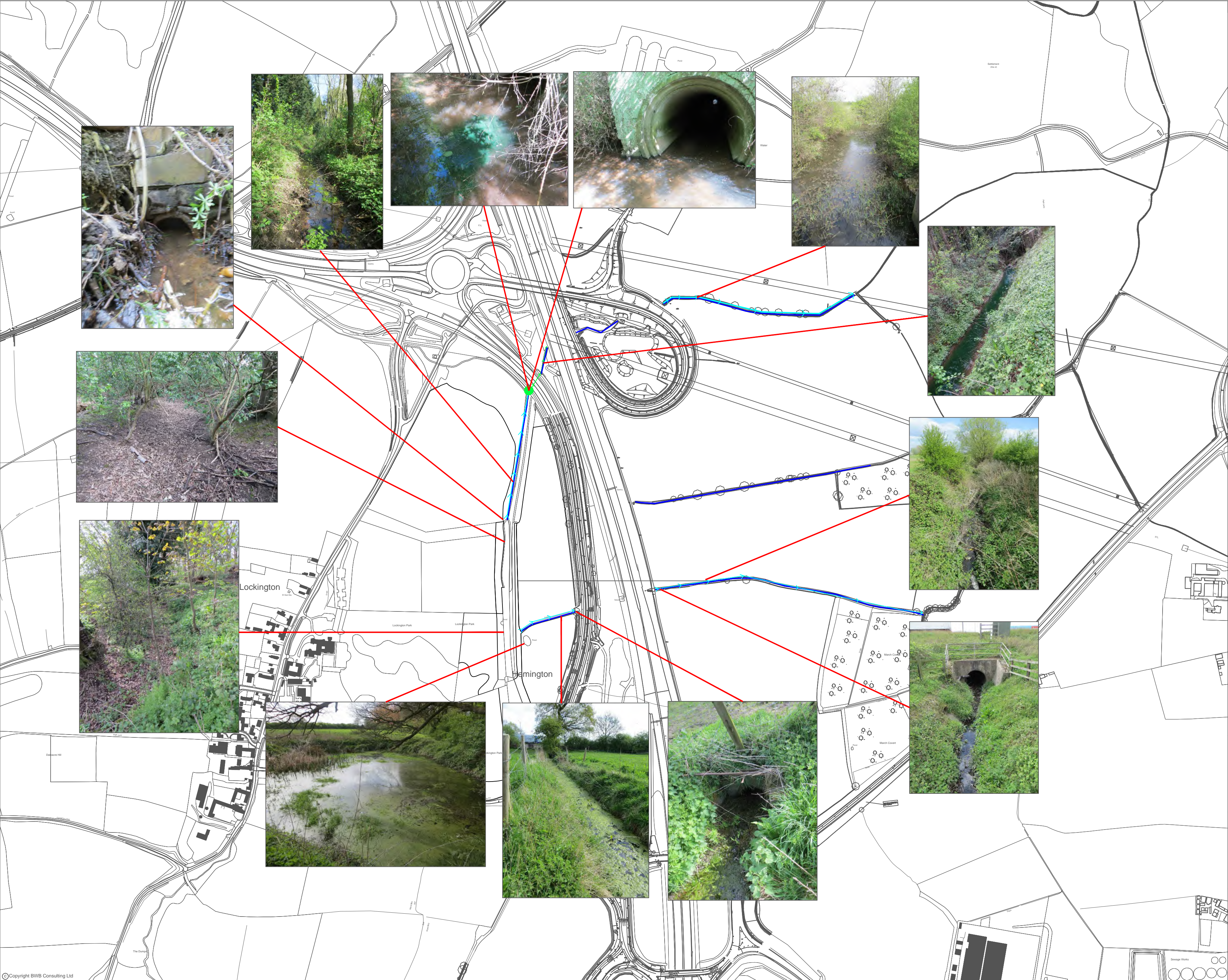


Figure 6 – Lockington Brook Connectivity from the EA's Lockington Brook Hydraulic Model Report (Ref: ENV0002887C-JBA-XX-HLC-RP-MO-0001-A1-C01-HLCD_Model_Report)

Summary

It is likely that the Main River Flood Assets identified by the EA are associated with a historical digitising error. In reality the channel and culverts were only ever associated with a minor watercourse and highway drainage culverts.

Moreover, the alterations made as part of the formation of the EMG rail interchange have entirely isolated the channel and culverts from land to the west of the A50 eastbound slip road.



NOTES

1. DO NOT SCALE THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED/ VERIFIED ON SITE. IF IN DOUBT ASK.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.

3. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL LEVELS IN METRES UNLESS NOTED OTHERWISE.

4. ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

KEY

Direction of flow

Direction of dye

Watercourses on site

Dye entry point

P1	15.05.14	PRELIMINARY ISSUE	LT	DA
Rev	Date	Details of issue / revision	Drw	Rev

ISSUES & REVISIONS

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Client

ROXHILL DEVELOPMENTS LTD

Project Title

EAST MIDLANDS
GATEWAY STRATEGIC
RAIL FREIGHT
INTERCHANGE

Drawing Title

DYE TRACING
LOCKINGTON BROOK

Scale	1:5000	Drawn	L. Tewson
Size	A2	Reviewed	D. Allum

Drawing Status

PRELIMINARY

Drawing No.	NTH/209/W45	Revision	P1
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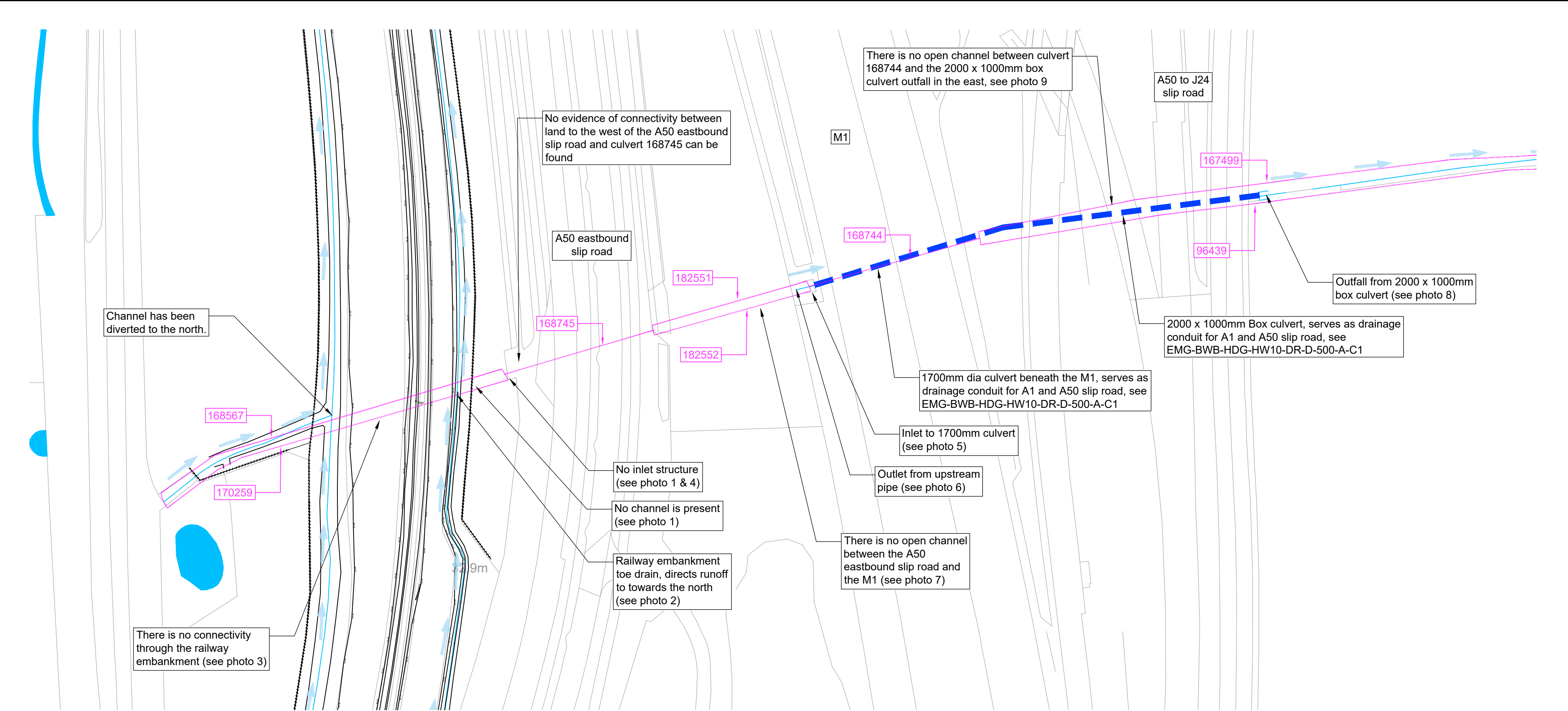


Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



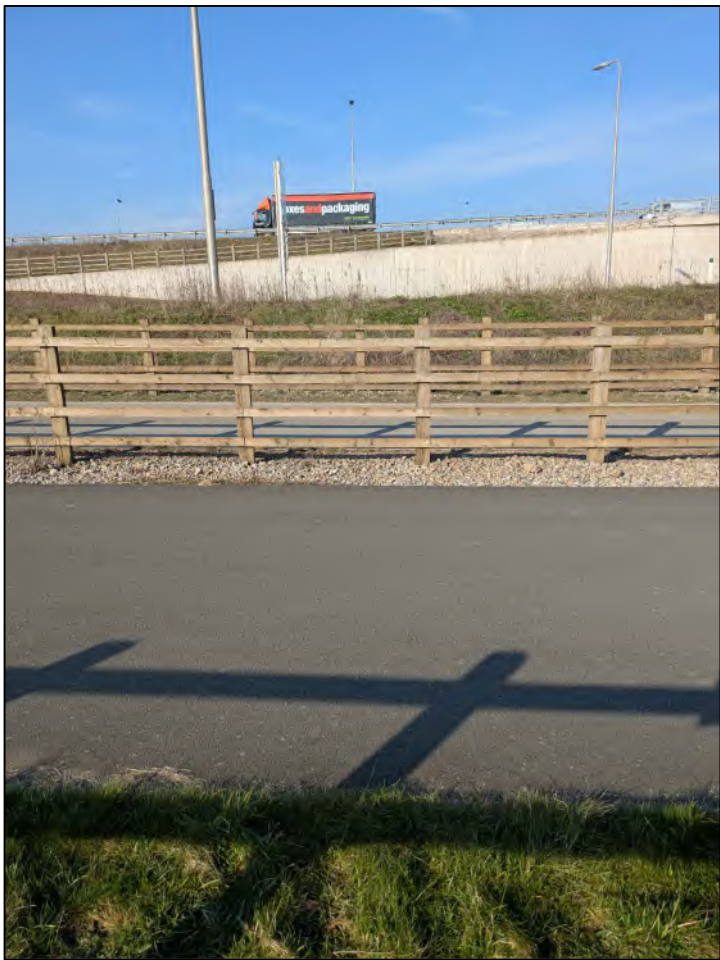
Photo 7



Photo 8



Photo 9



Notes

1. Do not scale this drawing. All dimensions must be checked/verified on site. If in doubt ask.

2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.

4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan

Legend

Observed direction of flow

Mapped location of EA Flood Assets from EA database.

P1

19.03.25

PRELIMINARY ISSUE

RG

CG

Rev

Date

Details of issue / revision

Drw

Rev

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Client

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Project Title

East Midlands Gateway Phase 2

Drawing Title

Site Visit Observations at EA Flood Assets

Drawn: R Green

Reviewed: C Gardner

BWB Ref: 220500

Date: 19.03.25

Scale@A2: 1:1000

Drawing Status

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Project - Originator - Zone - Level - Type - Role - Number

Status

Rev

EMG2-BWB-GEN-XX-SK-W-02

S2

P01