

# TELFORD & WREKIN STRATEGIC FLOOD RISK ASSESSMENT PHASE 2 ADDENDUM

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## **11. Mad brook**

**16**

### **11.1 Proposed Development Areas**

**16**

#### **APPENDIX A**

Assessment of all additional allocations (see separate document)

#### **APPENDIX B**

Assessment of all additional allocations in the vicinity of modelled areas (see separate document)

#### **APPENDIX C**

Hazard Maps for sites in the vicinity of modelled areas (see separate document)

#### **APPENDIX D**

Depth Maps for sites in the vicinity of modelled areas (see separate document)

#### **APPENDIX E**

Velocity Maps for sites in the vicinity of modelled areas (see separate document)

## EXECUTIVE SUMMARY

This document is an addendum to the existing Level 2 Strategic Flood Risk Assessment (SFRA) and assesses the flood risk to a number of potential housing and employment sites further to those assessed in the Level 2 SFRA. As such it is designed to be viewed in addition to the Level 2 SFRA.

This addendum has been written in line with changes to local planning policy with the production of the *Telford & Wrekin Local Plan*.

The creation of Lead Local Flood Authorities (LLFAs) under the *Flood and Water Management Act* 2010 has also lead to changes in the bodies responsible for managing various elements of flood risk, with LLFAs now responsible for managing flood risk from ordinary watercourses, surface water and groundwater.

Further to the Level 2 SFRA, this addendum also therefore considers flood risk to potential additional housing and employment sites from surface water flooding.

## 1. INTRODUCTION

In 2008 Telford & Wrekin Council (TWC) commissioned Halcrow Group Limited to produce a Level 2 SFRA. This addendum to the existing Level 2 SFRA has been commissioned in accordance with the *National Planning Policy Framework* (2012) (NPPF).

### 1.1 Local Planning Context

TWC are in the process of preparing the *Telford & Wrekin Local Plan*, which, on adoption, will replace the Local Development Framework (LDF) Core Strategy. The LDF Core Strategy was previously adopted in 2007 and is due to expire in 2016. This SFRA Addendum is intended to inform the Sequential Test and site selection process that the Council will undertake as part of the *Telford & Wrekin Local Plan*.

A further 16 potential residential sites and 14 potential employment sites have been identified, which either were not assessed or only considered in part in the 2008 Level 2 SFRA report.

## 2. LEAD LOCAL FLOOD AUTHORITIES

TWC has been designated the Lead Local Flood Authority (LLFA) for the borough of Telford & Wrekin under the *Flood and Water Management Act* (2010). As the LLFA, TWC holds the responsibility to manage the risk of flooding from surface water runoff, groundwater and Ordinary Watercourses. The Environment Agency (EA) retains their regulatory role in relation to Main Rivers.

As the LLFA, TWC also produced a *Local Flood Risk Management Strategy* (LFRMS) in 2015. The LFRMS looks in part at “Flood Risk from New Development”. The planning process is identified as a key area through which to manage flood risk in the borough and the LFRMS sets out TWC’s local requirements with regards to new developments and flood risk.

The LFRMS can be found at:

[http://www.telford.gov.uk/info/20172/planning\\_policy\\_and\\_strategy/683/local\\_flood\\_risk\\_management\\_strategy](http://www.telford.gov.uk/info/20172/planning_policy_and_strategy/683/local_flood_risk_management_strategy)

### 3. METHODOLOGY

#### 3.1 Level 2 SFRA Modelled Flood Data

The 16 additional potential housing sites and 14 additional potential employment sites are being assessed using the flood maps produced by Halcrow Group Limited as part of the Level 2 SFRA. These maps were produced for a Tributary of the Hurley Brook, the Hurley Brook, the Crow Brook, the Wall Brook (Donnington Drain), a Tributary of Wesley Brook and the Mad Brook. They define Flood Zones 2, 3a and 3b and model flood depths, velocities and hazard.

**Where Level 2 SFRA mapping is not available, the EA's National Flood Maps have been used.**

#### 3.2 Surface Water Flooding

As the LLFA, TWC consider and manage the flood risk from surface water flooding, therefore this Level 2 SFRA Addendum includes an assessment of the flood risk to new development from surface water. The EA's second generation updated Flood Map for Surface Water (uFMfSW) has been used, and the risk of surface water flooding from 1 in 30 year and the 1 in 100 year return periods has been assessed.



## **4. DEVELOPMENT RECOMMENDATIONS FOR SURFACE WATER FLOODING**

Where a site is affected by surface water flooding, developers should identify the nature of the flood risk and manage this within the design of the site. The EA's surface water flooding maps should be consulted as the most currently up to date flood maps for surface water flooding in the borough of Telford & Wrekin.

Where a site is shown to be at risk of surface water flooding, any areas of pooling should be determined, as should any surface water flow paths crossing the site. The effect of development on offsite receptors would also need to be determined, as would the effect of additional surface water flows on any site attenuation.

Development should be directed away from areas where surface water is expected to pool and exceedance flows directed away from properties.

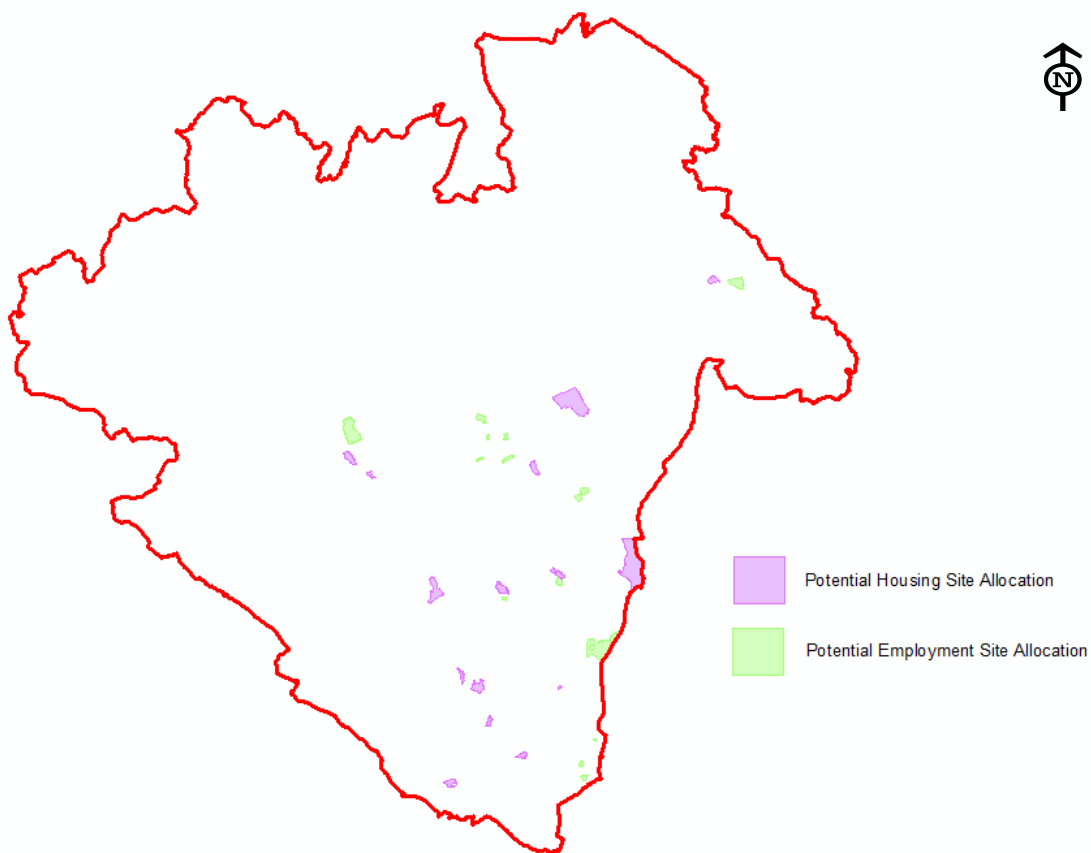
Further information on TWC's approach to development in areas of surface water flood risk can be found in the LFRMS (see Section 2).

## 5. SITE ASSESSMENT

### 5.1 Overview

Telford & Wrekin Council are currently appraising 16 potential housing sites and 14 employment sites additional to those considered in the existing SFRA Phase 2 report.

To assist the Council with this process, this study has included an assessment of the flood risk posed to each of these additional sites, with associated recommendations. The results of the assessment are tabulated in Appendix A. The location of sites is shown in Figure 1.



**Figure 1 - Potential Site Allocations**

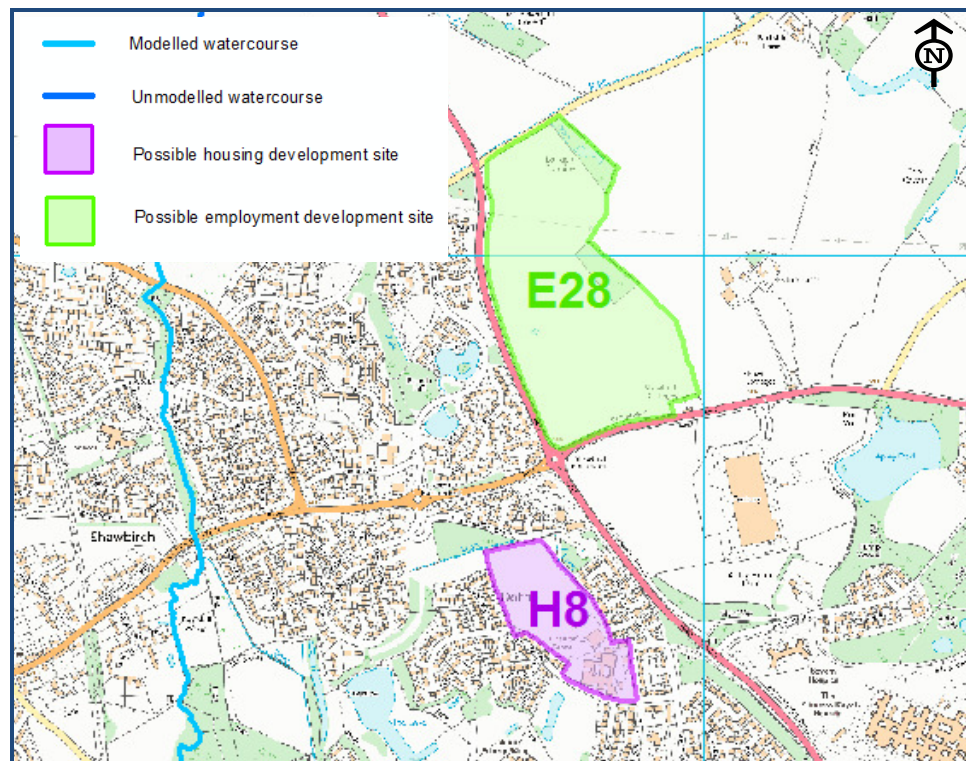
For sites where further modelling is available, detailed site assessments can be found in Appendix B and hazard, depth and velocity maps can be found in Appendices C, D and E respectively.

## 6. TRIBUTARY OF THE HURLEY BROOK

### 6.1 Proposed Development Areas

There are two additional sites available for housing development and employment in the vicinity of the modelled stretch of the Hurley Brook Tributary. The potential housing development sites is H8 and the potential employment development site is E28.

A site plan is shown in Figure 2. These sites are assessed in more detail in Appendix B1.



**Figure 2 - Site plan of potential development sites along the Hurley Brook Tributary**

## **7. HURLEY BROOK**

### **7.1 Proposed Development Areas**

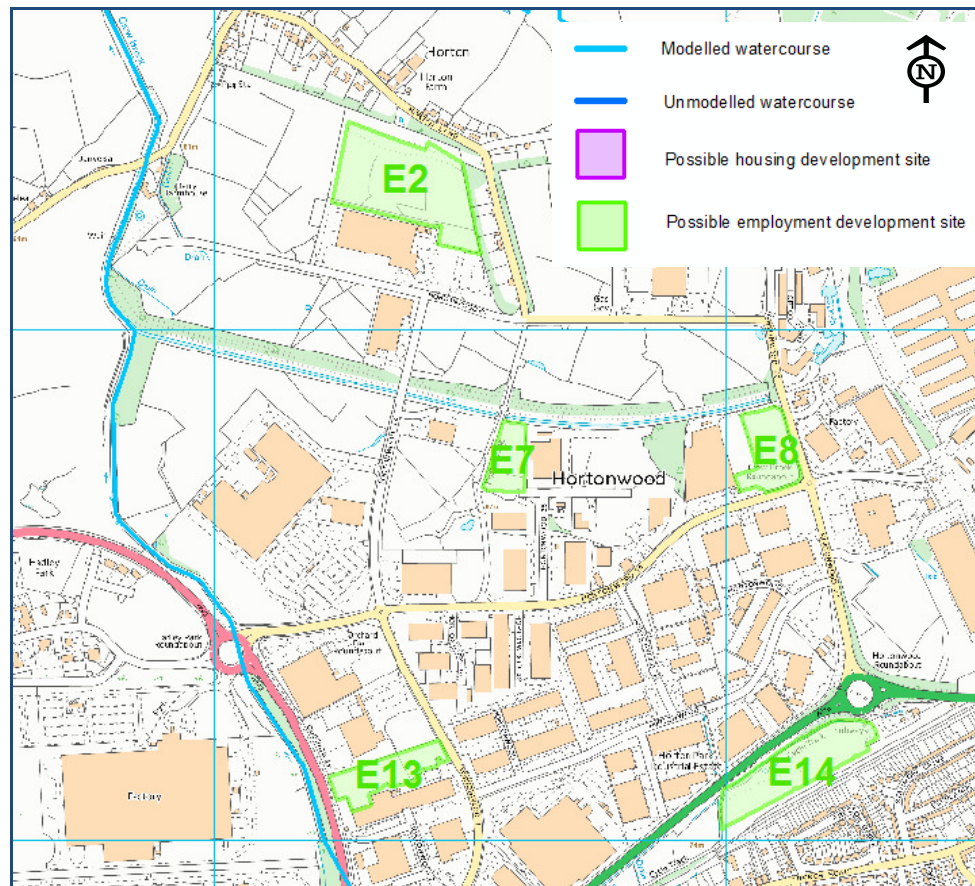
There are no additional proposed sites for housing development or education in the vicinity of the modelled stretch of the Hurley Brook.

## 8. CROW BROOK

### 8.1 Proposed Development Areas

There are 5 additional sites available for employment in the vicinity of the modelled stretch of the Crow Brook. The additional employment sites are E2, E7, E8, E13, E14. Half of E13 was assessed by the Level 2 SFRA report as EMP4-POR (62000), however it has been included in this addendum to provide an assessment of the rest of the site.

A site plan is shown in Figure 4. These sites are assessed in more detail in Appendix B2.



**Figure 3 - Site plan of potential development sites along the Crow Brook**



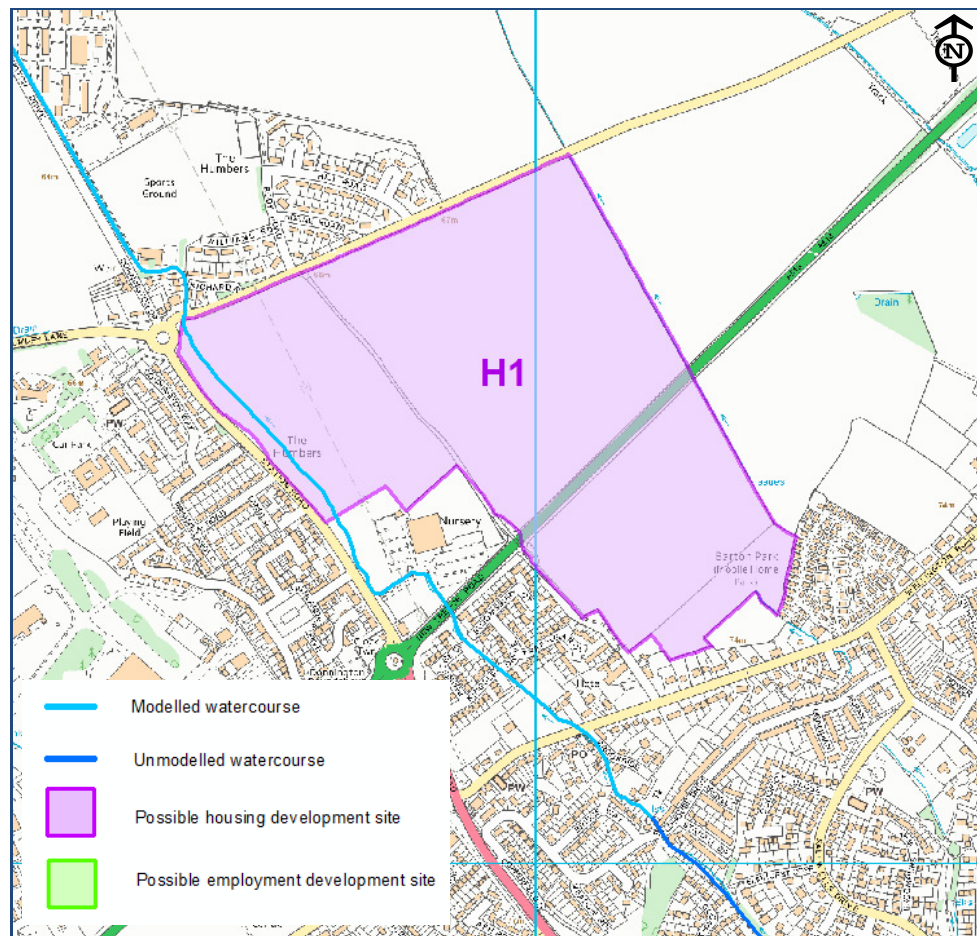
## 9. WALL BROOK (DONNINGTON WATERCOURSE)

### 9.1 Proposed Development Areas

There is one additional site available for housing in the vicinity of the modelled stretch of the Wall Brook. The additional housing site is H1.

The site was mostly assessed by the Level 2 SFRA report as 482, 114, 504, however it has been included in this addendum to provide an assessment of the rest of the site.

A site plan is shown in Figure 5. This site is assessed in more detail in Appendix B3.



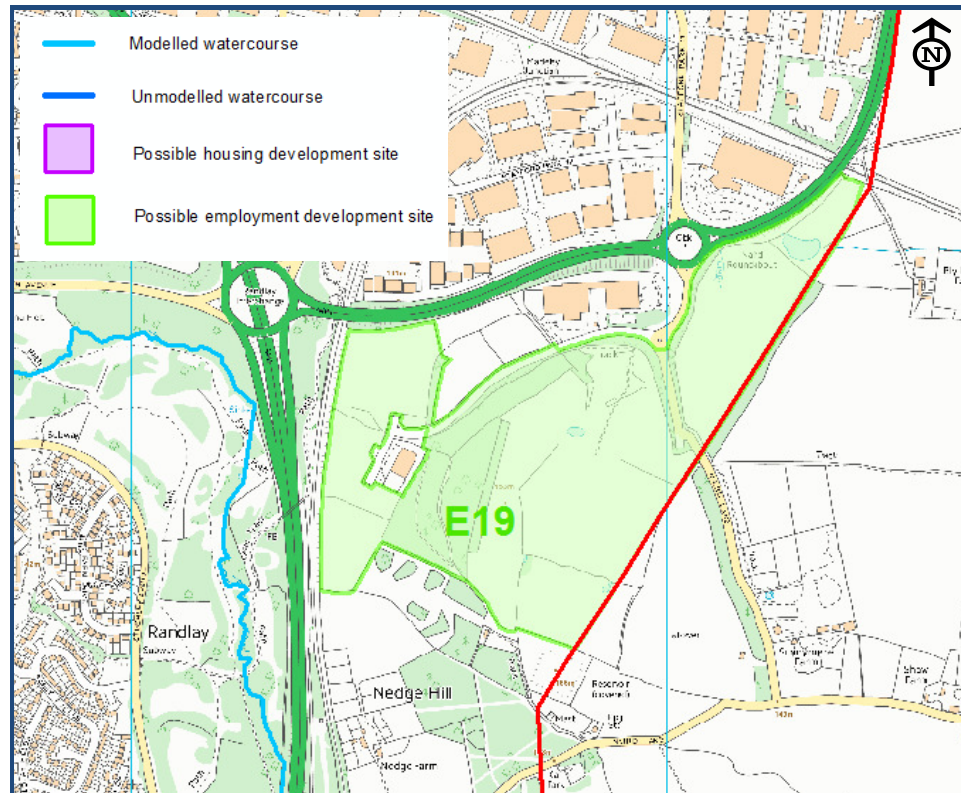
**Figure 4 - Site plan of potential development sites along the Wall Brook**

## 10. TRIBUTARY OF THE WESLEY BROOK

### 10.1 Proposed Development Areas

There is one additional site available for possible employment in the vicinity of the modelled stretch of the Wesley Brook Tributary. The additional employment site is E19.

A site plan is shown in Figure 6. This site is assessed in more detail in Appendix B4.



**Figure 5 - Site plan of potential development sites along the Wesley Brook Tributary**

## 11. MAD BROOK

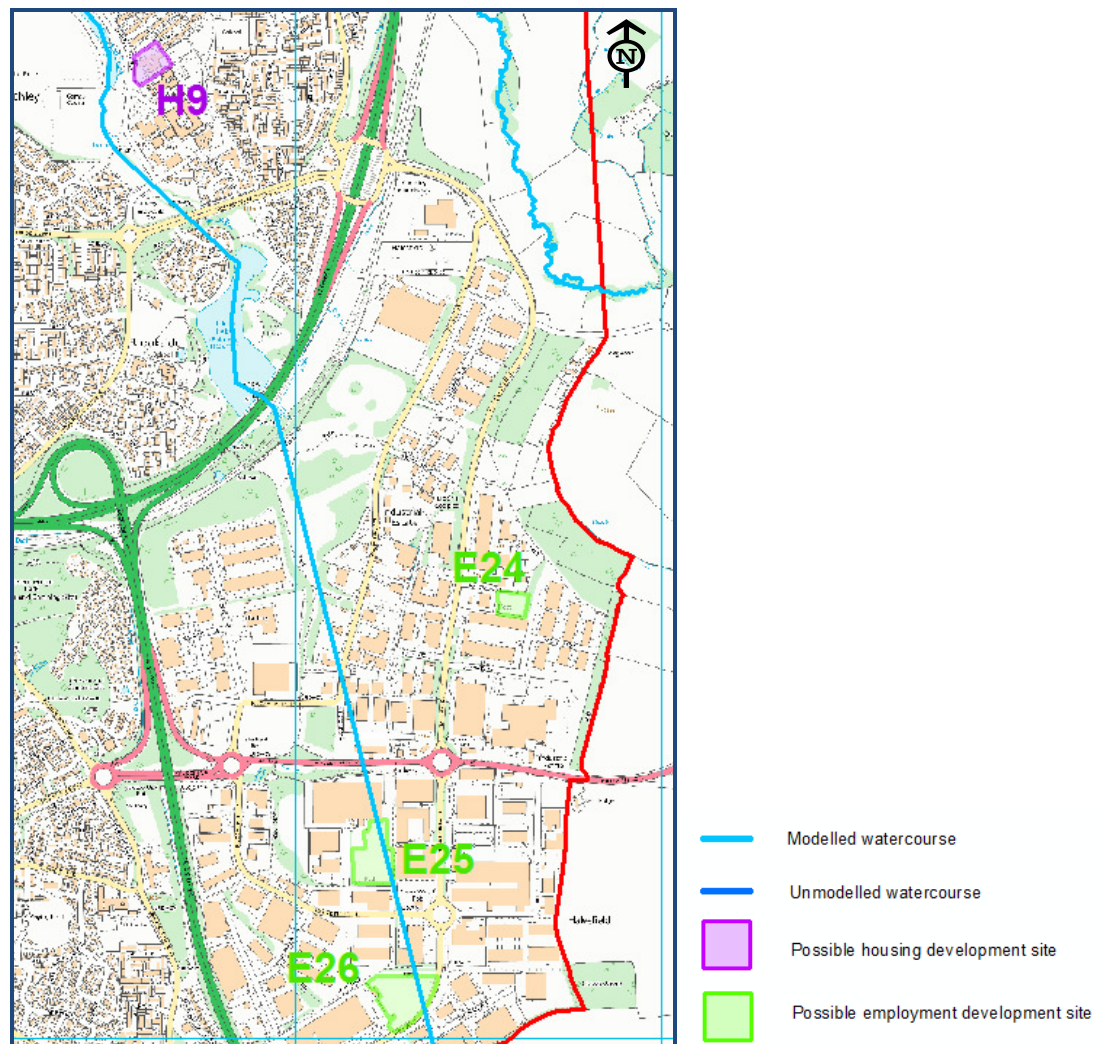
### 11.1 Proposed Development Areas

There is one additional site available for possible housing and three sites available for possible employment in the vicinity of the modelled stretch of Mad Brook.

The housing site is H9. Half of this site was assessed in the Level 2 SFRA report as Site 117 however it has been included in this addendum to provide an assessment of the rest of the site.

The employment sites are E24, E25, E26.

A site plan is shown in Figure 7. These sites are assessed in more detail in Appendix B5.



**Figure 6 - Site plan of potential development sites along the Mad Brook**



## 12. CONCLUSIONS

Of the additional potential housing development and employment sites identified in this report, two potential housing development sites and one potential employment site are directly affected by Flood Zones.

Potential housing development site H9 is affected by flooding from the Wall Brook (ref. Appendix B) and H2 is affected by a National Flood Zones from the Wesley Brook (ref. Appendix A).

Potential employment site E26 is affected by flooding from the Mad Brook (ref. Appendix B).

Where sites are affected by flooding, the recommendations set out in Appendixes A and B of this report and Section 11 of the Level 2 SFRA report should be followed.

### 12.1 Surface Water flooding

A number of sites are also mapped as being affected by a surface water flood risk.

Where sites are affected by surface water flooding, the recommendations set out in Section 4 of this report should be followed.

## **APPENDIX A**

Assessment of all additional allocations

See separate document

## **APPENDIX B**

Assessment of all additional allocations in the vicinity of modelled areas

See separate document

## **APPENDIX C**

Hazard Maps for sites in the vicinity of modelled areas

See separate document

## **APPENDIX D**

Depth Maps for sites in the vicinity of modelled areas

See separate document

## **APPENDIX E**

Velocity Maps for sites in the vicinity of modelled areas

See separate document