

# Development, Flood Risk and Aquifer Protection

Supplementary Planning Document

## April 2006

A clean, healthy, vibrant, safe and sustainable borough delivering the best for 'Erewash'



## **EREWASH BOROUGH COUNCIL**

## DEVELOPMENT, FLOOD RISK AND AQUIFER PROTECTION

## SUPPLEMENTARY PLANNING DOCUMENT

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#### **APRIL 2006**

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## About this Guidance

**1.1** This Supplementary Planning Document (SPD) has been prepared in accordance with current Government planning guidance. Its purpose is to supplement relevant policies and proposals as set out in the Erewash Borough Local Plan Adopted July 2005. The contents of this document will therefore guide those submitting planning applications. When adopted it will be given considerable weight in the determination of planning applications and it is therefore expected that developers will follow the advice as set out.



## Introduction

- 2.1 Flooding can have severe social, economic and environmental consequences. Within England about 1.7 million homes and 130,000 commercial properties are at risk of flooding. Nationally, the scale of flooding appears to be worsening. Climate change is predicted to increase flood risk over time.
- **2.2** Government is acting through a number of measures to reduce flood risk. Planning for growth seeks to minimise the potential threat of increased flood risk to new and existing properties.
- **2.3** Water is a precious natural resource and the protection of water resources from potentially harmful effects of new development is a key part of ensuring a sustainable environment.
- 2.4 Applicants for planning permission should assess the risk posed by the development. They should consider the specific risk of flooding to the proposed development, as well as possible effects of the development on flood risks elsewhere in terms of its effect on flood flows, flood storage capacity and the surface water run-off implications. Applications for renewal of planning permission should be reviewed in light of the latest evidence on flood risk, taking into account any reviews of land allocations conducted in accordance with this guidance. Equally applicants must also consider the effect of the proposed development on the need to protect aquifers from pollution.
- **2.5** Reference should also be made to all the Council's other SPD's, specifically Biodiversity and Planning Obligations.



## **Policies**

3.1 The purpose of this Document is to support and amplify the policies of the Erewash Borough Local Plan (adopted July 2005). The Local Plan provides a framework for the control of development in Erewash. The Policies relating to flood risk, SuDs and aquifers are DC7 – Development and Flood Risk, DC8 – Sustainable Drainage Systems, EV17 – Environmental Pollution and EV18 – Aquifer Protection these are contained in Appendix A of this document. This SPD was endorsed and prepared in partnership with the Environment Agency.



## A Strategic Approach

4.1 Planning Policy Guidance Note 25 – Development and Flood Risk was published in July 2001; Draft Planning Policy Statement 25 published December 2005 re-emphasises the Government's commitment to managing flood risk and development. The Council wishes to promote an integrated and sustainable approach to flood risk management, surface water drainage and the water environment in dealing with development proposals in Erewash Borough.



## **Sources of Flooding and Responsibilities**

**5.1** Flooding can occur in several forms: either fluvial flooding when a watercourse comes out of bank in a flood event, rising groundwater or from surface water flooding resulting from site run-off. Paragraphs 18 and 19 of PPG25 set out the duties of the Environment Agency and Erewash Borough Council in respect of 'main rivers' and 'ordinary watercourses'.



## **River Flooding**

- 6.1 Areas at risk of flooding from 'Main Rivers', and catchments of 'Ordinary Watercourses' are shown on maps published by the Environment Agency. The information provided by the Agency is the best information available and is subject to continuous review. As a consequence, the plan accompanying this guidance shows Flood Zone 3; areas of high flood risk where further flood risk investigation will be required. For the most recent Flood Map please refer to the Environment Agency web-site: www.environment-agency.gov.uk/flood
- 6.2 A margin of error remains inevitable due to the use of catchment scale mapping used in the Flood Zone mapping. The Environment Agency has identified sub-standard flood defences by using Flood Zone Mapping protecting Sawley and Long Eaton. Feasibility work has started on proposed improvements to the defences but until such time as works are complete there will be the need to take account of increased flood risk in a flood risk assessment prior to the determination of a planning application. The Flood Zone Maps have been prepared using catchment scale mapping which is not as accurate as detailed site survey information. It may be subject to error and individual site levels (to Ordnance Datum) should be compared to the predicted flood levels for Flood Zone 3.
- **6.3** In addition, the Environment Agency is preparing a Strategy for the River Derwent. The findings of the study will be available from the Environment Agency and will give the best available information in respect of flood risk.



## Flood Risk Assessment

- 7.1 A flood risk assessment (FRA) needs to be submitted with a planning application in an area shown as being in Flood Zone 3 on the accompanying plan, although the detail required will be proportionate to the nature of the proposal and the risk involved. Sensitive development in areas lying within Flood Zone 2 will also require flood risk assessment.
- 7.2 Initially development proposals within or adjacent to areas at risk of flooding should:
  - Be accompanied by an accurate topographical survey of the site, showing existing and proposed ground levels to Ordnance Datum.
  - Be designed so that the finished ground floor level of a building is set not less than 600mm above the 1:100 flood level. This level of freeboard provides additional safety in light of uncertainty associated with climate and model predictions.
  - Provide for safe pedestrian access and escape and demonstrate satisfactory access for the emergency services in a flood event.
  - Incorporate features of flood proof construction where the 600mm freeboard cannot be achieved. Advice can be found in DTLR guide 'Preparing for Floods: Interim guidance for improving the flood resistance of domestic and small business properties' (Feb 2002) and the Environment Agency Floodline publication 'Damage Limitation: How to make your home flood resistant' (a free copy of which is available by telephoning 0845 988 1188). Following this advice will reduce cost and disruption caused by flooding and the subsequent repairs.
- **7.3** Further information to that outlined in the above bullet-points may also need to be incorporated in a flood risk assessment, determined by the risks involved and early discussion with the Environment Agency.
- **7.4** In areas of flood risk, other than in the case of domestic and small commercial extensions up to 250m<sup>2</sup>, the Environment Agency will offer advice and provide a Letter of Compliance when an acceptable flood risk assessment has been agreed prior to the submission of an application. The Letter of Compliance and relevant related documents should then be submitted in support of a planning application. It should be noted that an assessment of flood risk and potential impact will be required for all planning applications within 8 metres of the top of the bank of a watercourse or a flood defence. The prior written consent of the Environment Agency is required for any development within 8 metres of the top of the bank of a 'main river' or within 8 metres of an Environment Agency maintained flood defence and will only be granted consent in highly exceptional circumstances.
- **7.5** Although the Council's consent is not required for development affecting an ordinary watercourse planning decisions will have regard to policies in the development plan to ensure that the proposal would not have an adverse impact on the management of flood risk.



## Flood Risk Assessment

- **7.6** When considering applications for the redevelopment of buildings sited on the edge of both 'Main Rivers' and 'ordinary watercourses', the opportunity should be taken to retain or provide access for maintenance or improvement works. The requirements relevant to individual sites should be discussed in advance with either the Environment Agency or the land drainage department of Erewash Borough Council.
- 7.7 Development on all sites of over 1 hectare has the potential to alter the characteristics of the surface-water regime and could therefore create or increase flooding within the catchment. Planning applications will require a flood risk assessment considering the need to balance or attenuate surface water to prevent an increased rate of discharge from the site. It may be appropriate to seek to reduce existing rates of surface water discharge in certain cases. For sites between 1-5ha advice on the content of the flood risk assessment should be sought from Erewash Borough Council, while the Environment Agency will provide pre-application advice for sites over 5 hectares.



## Sustainable Drainage

- 8.1 PPG25 advocates the use of Sustainable Drainage Systems (SuDS) for the disposal of surface water; an approach which is supported by Part H1 of the Building Regulations and Policy DC8 of the Local Plan. SuDS can take various forms:
  - Soakaways or other methods of surface water infiltration can be effective where ground has adequate porosity and the discharge will not have an adverse impact on the quality of groundwater. Minor contaminants in surface water can naturally degrade if discharged to ground and may be preferable to direct discharge to a watercourse.
  - Alternatively, balancing ponds may be required, acting to store water in times of flood, before it is released to a watercourse at a controlled rate of discharge. Balancing ponds also offer the opportunity to create wetland habitat and can be incorporated into areas of public open space. However, the maintenance of such facilities should be ensued for the lifetime of the development at an early stage of negotiations.
  - Other sustainable techniques may be appropriate and advice is available from CIRIA in the publication C522 Sustainable Urban Drainage Systems Design Manual for England and Wales ISBN 0860 175 22 7.



## **Culverting of Watercourses**

- **9.1** The culverting of all watercourses requires the prior written consent of the Environment Agency. However, it is Environment Agency policy not to grant consent for culverting other than for essential access crossings as it can contribute to flooding problems as well as fragmenting the continuity of wildlife habitat.
- **9.2** Where possible, culverted watercourses should be re-instated as open channel in order to reduce the risk of flooding, reduce maintenance and to restore continuity of natural habitat.



## **Aquifer Protection and Source Protection**

Environmental Health Section.

- **10.1** Areas of the Borough are underlain by major aquifers and are shown on the map in Appendix B. In addition there are source protection zones related to a licensed abstraction at Trent College, Long Eaton and a public water supply abstraction at Little Eaton. Details relating to licensed abstractions are held by the Environment Agency and details of non-licensed abstractions are held by the Borough Council's
- **10.2** In considering planning applications for development on major aquifer or in the catchment of licensed abstractions, pollution prevention measures will need to be incorporated in the design to safeguard against pollution of the water environment. In such areas it will be appropriate for clean roof water only to be discharged to soakaway. Contaminated drainage will need to be either discharged to main sewer or, if mains drainage is not available, to a sealed system fitted with a level warning device to advise when emptying is required. Alternatively contaminated surface water drainage, such as highway drainage, may need to be passed through an oil interceptor or a natural method of biological treatment (e.g. reed bed) prior to discharge of contaminated drainage either to ground or to a watercourse and will not necessarily be granted. Further advice on pollution control may be obtained from the Environment Agency.





## **Sources of Information and Advice**

#### **Environment Agency:**

Indicative flood maps are available from the Environment Agency's web site: <u>www.environment-agency.gov.uk/flood</u>

Environment Agency Lower Trent Area Trentside Offices Scarrington Road West Bridgford Nottingham NG2 5FA

Tel: 0115 846 3635

Information for development affecting an ordinary watercourse can be obtained from

Dave Bramwell Assistant Director Green Spaces and Street Scene Erewash Borough Council Merlin House Ilkeston Derbyshire

Tel: 0115 8508331

'Development and Flood Risk' - Planning Policy Guidance Note 25, DTLR, July 2001 available form the ODPM website <u>www.odpm.gov.uk</u>

'Sustainable Urban Drainage Systems' – Best Practice Manual for England and Wales, Report C522, CIRIA 2000 available form their website at <u>www.ciria.org.uk</u>

'Damage Limitation – How to make your home flood resistant' – Environment Agency Floodline, December 2001 - a free copy of which is available by telephoning 0845 988 1188

'Preparing for Floods: interim guidance for improving the flood resistance of domestic and small business properties' – DTLR, Feb 2002.



## **Flood Zones and Sensitive Development**

#### Flood Zone 3:

Area of high risk with an annual probability of 1% or greater of flooding.

#### Flood Zone 2:

Area of low to medium risk with an annual probability of 0.1% - 1% of flooding. The Environment Agency's Flood Zone 2 map also includes area which have flooded in the past but lie outside Zone 3.

#### Flood Zone 1:

Area of little or no risk of flooding with an annual flood risk of less than 0.1%.

#### Sensitive Development:

Essential civil infrastructure such as hospitals, fire stations, emergency depots etc., development intended for occupation/use by young children or old people.





## Flood Risk Terminology

Attenuation: To reduce the rate of flow through a system, which has the effect of reducing the peak flow and increasing the duration of a flow event.

Balancing pond/lake/lagoon: A feature designed to attenuate the flows by storing run-off during the storm and releasing it at a controlled rate during or after the storm. These can either be on line, i.e. the watercourse continues to flow through the storage area. Or offline, i.e. the water is elsewhere and discharged at a point into the watercourse.

Catchment: The area contributing flow to a point on a drainage system.

Culvert : A covered channel or pipeline used to continue a watercourse or drainage path under an artificial obstruction (typically roads and railways)

DEFRA: Department of the Environment, Food and Rural Affairs

Design criteria: A set of standards agreed by the developer, planners and regulators that the proposed system should satisfy.

Fluvial: Occurring from a river.

Floodplain: Land adjacent to a watercourse that would be subject to regular flooding under natural conditions.

Freeboard: Height above which a flood defence is built above a predicted flood level. This provides an additional safety margin for circumstances such as climate change, uncertainties of modelling/predicting flood levels and unpredictable events.

Groundwater: Water that has percolated into the ground. It includes water in both the unsaturated zone and the water table.

Main river: A watercourse shown as such on the statutory maps held by the Environment Agency and DEFRA and can include any structure or appliance for controlling the flow of water into, in or out of the channel.

Ordinary Watercourse: A watercourse which does not form part of any main river and can include a ditch, seasonal watercourse or artificial channel.

Soakaway: A subsurface structure into which surface water is conveyed to allow infiltration into the ground.



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## **Sources of Information**

If you live in Ilkeston, Morley, West Hallam, Little Eaton, Breadsall, Dale Abbey, Stanton-by-Dale, Stanley, Stanley Common and Breaston and wish to discuss your plans please call 0115 907 2220.

Queries regarding Long Eaton, Sawley, Sandiacre, Ockbrook, Borrowash, Draycott and Risley please call 0115 907 2210.

Alternatively you may e-mail us at planning@erewash.gov.uk. Our offices are located at Long Eaton and are open Monday to Thursday 9:00am to 5:00pm, and on Friday's from 9:00am to 4:30pm.

If you wish to write to us for informal comments on your proposals the Council's address is:

Erewash Borough Council Development and Regulatory Services Directorate Town Hall Long Eaton Derbyshire NG10 1HU



## Sources of Information





## **Local Plan Policies**

#### Policy

#### **PROPOSAL DC7 - DEVELOPMENT AND FLOOD RISK**

PLANNING PERMISSION WILL ONLY BE GRANTED FOR DEVELOPMENT PROPOSALS WITHIN AREAS OF FLOOD RISK WHERE THE DEVELOPMENT WOULD HAVE NO ADVERSE EFFECT ON THE MANAGEMENT OF THAT RISK. WHERE IT IS JUDGED THAT A DEVELOPMENT PROPOSAL WOULD BE LIKELY TO INCREASE FLOOD RISK, SATISFACTORY COMPENSATORY MEASURES WILL NEED TO BE INCORPORATED.

WHEN CONSIDERING DEVELOPMENT PROPOSALS THE COUNCIL WILL HAVE REGARD TO THE NEED TO:

- 1. ENSURE THAT DEVELOPMENT IS ADEQUATELY PROTECTED FROM FLOODING;
- 2. PROVIDE ACCESS TO A WATERCOURSE FOR MAINTENANCE PURPOSES;
- 3. PREVENT DEVELOPMENT FROM EXACERBATING EXISTING OR POTENTIAL FLOOD RISK;
- 4. ENSURE THAT THERE ARE NO REASONABLE ALTERNATIVE OPTIONS AVAILABLE FOR THE PROPOSED DEVELOPMENT IN A LOWER FLOOD RISK CATEGORY, CONSISTENT WITH OTHER SUSTAINABLE DEVELOPMENT OBJECTIVES



### **Local Plan Policies**

#### Policy

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#### POLICY DC8 - SUSTAINABLE DRAINAGE SYSTEMS (SUDS)

THE BOROUGH COUNCIL WILL ENCOURAGE THE USE OF SUDS SUCH AS REED BEDS, AS A MEANS OF TREATING SURFACE WATER RUN-OFF FROM DEVELOPMENT SITES. IN PARTICULAR SUDS METHODS WILL NORMALLY BE REQUIRED WHERE DEVELOPMENT INVOLVING SIGNIFICANT SURFACE WATER RUN-OFF IS PROPOSED IN AREAS:

- 1. WHERE DIFFUSE POLLUTION CAN REACH A WATERCOURSE WITHOUT ADEQUATE PRIOR FILTERING;
- 2. WHICH LIE UPSTREAM FROM AN AREA PRONE TO FLOODING AND WHERE THE SLOWING DOWN OF SURFACE WATER WOULD AVOID EXACERBATING THE PROBLEM, AND/OR
- 3. WHERE THE EXISTING DRAINAGE SYSTEM IS RESTRICTED IN ITS ABILITY TO ACCEPT THE DEVELOPMENT PROPOSAL.

#### Policy

#### POLICY EV17 - ENVIRONMENTAL POLLUTION

1. PLANNING PERMISSION WILL ONLY BE GRANTED FOR DEVELOPMENT WHERE THERE IS NO SIGNIFICANT RISE IN AIR, WATER, NOISE, LIGHT OR SOIL POLLUTION.

THE BOROUGH COUNCIL WILL IMPOSE CONDITIONS ON PLANNING PERMISSIONS, AS NECESSARY, TO ENSURE THAT POLLUTION LEVELS CREATED BY DEVELOPMENTS CAN BE MINIMISED.

2. PLANNING PERMISSION WILL ONLY BE GRANTED FOR DEVELOPMENT CLOSE TO EXISTING SOURCES OF POLLUTION, WHERE THE PROPOSED USE IS COMPATIBLE WITH THE EXISTING USE

THE BOROUGH COUNCIL WILL IMPOSE CONDITIONS ON PLANNING PERMISSIONS, AS NECESSARY, TO ENSURE THAT FUTURE OCCUPIERS OF DEVELOPMENTS ARE PROTECTED FROM EXISTING SOURCES OF POLLUTION.



## **Local Plan Policies**

#### Policy

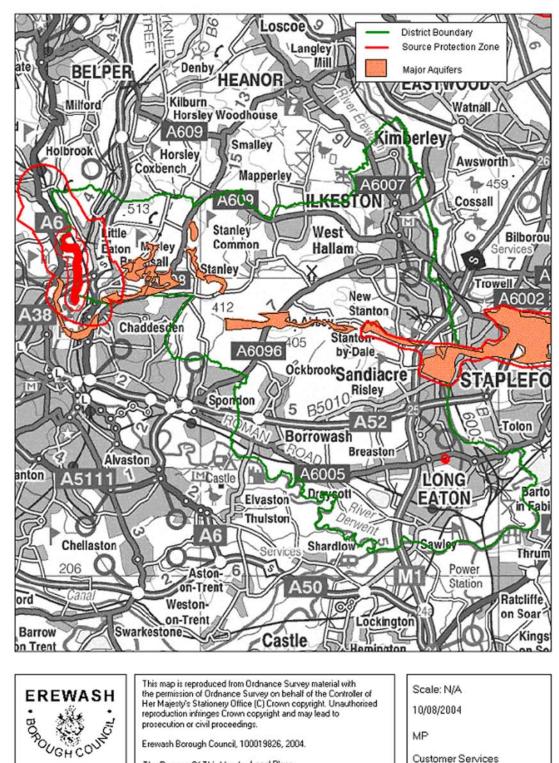
#### **POLICY EV18 - AQUIFER PROTECTION**

PLANNING PERMISSION WILL NOT BE GRANTED FOR DEVELOPMENT WHICH WOULD BE LIABLE TO CAUSE CONTAMINATION OF THE GROUNDWATER IN AQUIFERS UNLESS SATISFACTORY MEASURES CAN BE CARRIED OUT AS PART OF THE DEVELOPMENT TO PREVENT SUCH CONTAMINATION TAKING PLACE.



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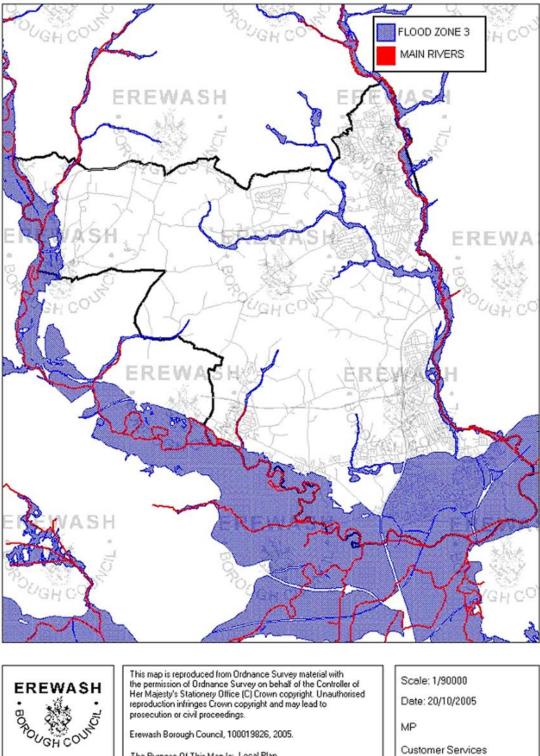


The Purpose Of This Map Is: Local Plans

Customer Services

Major Aquifiers and Source Protection Zone

## Maps



MP

Customer Services

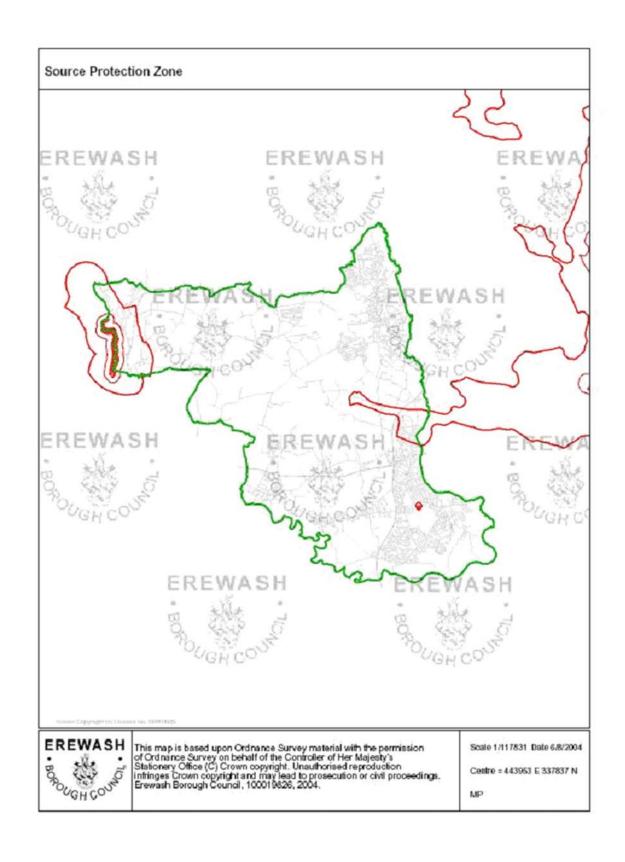


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Flood Zone 3

Erewash Borough Council, 100019826, 2005.

The Purpose Of This Map Is: Local Plan



Source Protection Zone

If you require this information in your language, please contact the Council using one of the below methods.

"જો તમારે આ માહિતીની તમારી પોતાની ભાષામાં જસ્ર હોય, તો નીચેની પદ્ધતિઓમાંથી એકનો ઉપયોગ કરીને કાઉન્સિલનો સંપર્ક સાધો."

如果您需要您自己语言的此信息,请通过以下方法之一与委员会联系。

''ਜੇ ਇਹ ਜਾਣਕਾਰੀ ਤੁਹਾਨੂੰ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੋਵੇ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਹੇਠ ਲਿਖਿਆਂ ਵਿਚੋਂ ਕਿਸੇ ਇੱਕ ਤਰੀਕੇ ਦੀ ਵਰਤੋਂ ਕਰਦੇ ਹੋਏ ਕੈਂਸਲ ਨਾਲ ਸੰਪਰਕ ਕਰੋ।''

" اگر آپ کو ی ۵ معلومات اپنی زبان می ں درکار وتو، برا ۵ کرم درج ذیل می س سے کونی طریق ۵ استعمال کرتے ہوئے کونسل سے رابط ۵ کری ں"

## 0845 907 22 44



## communications@erewash.gov.uk



Ilkeston Town Hall, Wharncliffe Road, Ilkeston, Derbyshire DE7 5RP Long Eaton Town Hall, Derby Road, Long Eaton, Derbyshire NG10 1HU