

COMMUNITY COUNCIL LIAISON SUB-COMMITTEE – 20TH JULY 2005

SUBJECT: JAPANESE KNOTWEED

REPORT BY: DIRECTOR OF THE ENVIRONMENT

1. PURPOSE

- 1.1 In response to Community/Town Councils request for further information regarding Japanese Knotweed and in particular actions being taken to combat its spread.

2. BACKGROUND

- 2.1 Japanese Knotweed (*Fallopia japonica* /*Polygonum cuspidatum* /*Reynoutria japonica*) was introduced to the UK less than 200 years ago as an ornamental garden plant. It is a vigorously growing perennial plant which overruns other vegetation, forming dense tall stands which can harbour vermin, collect litter, obstruct drainage channels or sight lines and dies back to an unsightly mass of dead stems in winter. Invading shoots can displace channel protection systems and erosion control materials. They can penetrate footpaths and paving. Japanese Knotweed is already a major nuisance and an expensive maintenance problem.
- 2.2 The knotweed can spread locally through underground stems (rhizomes) but the main method of distribution has been the movement of infested soil and fill materials for earthworks. Even very small root fragments have been shown to regenerate new plants. New shoots can grow by 4 centimetres a day during the spring resulting in plants of up to 2 metres high by the summer. The roots of the plant can spread several metres, producing further stems.
- 2.3 Within the County borough Knotweed has become a threat to certain types of biodiversity primarily due to 'shading' and the density of the 'litter thatch' left over when the plant dies back at the end of the growing season. It is also detrimental in terms of animal welfare and peoples perception of Caerphilly. It increases maintenance costs to the Council and can significantly increase development costs where a contaminated site is to be developed. There are also potential environmental dangers through the inappropriate treatment of knotweed by the public and others.

3. DEMAND FOR TREATMENT

- 3.1 The control of invasive species is a global issue and at the Rio Summit 1992, all governments were urged to take action to 'prevent the introduction of, to control, or eradicate, these alien species which threaten ecosystems, habitats or species.' In the United Kingdom, it is an offence to plant or otherwise cause the species to grow in the wild under the Wildlife and Countryside Act 1981, Knotweed and Himalayan Balsam being listed under Schedule 9 of the Act. The legislation does not, however, enforce any direct action to remove these species where they are present.
- 3.2 Further to this, the Environmental Protection Act 1990 classifies Knotweed as a Controlled Waste meaning it must be disposed of in a suitable way. Not only are few of the public aware of this, for those that do, it may prove prohibitive for them to dispose of arisings in an authorised manner. Composting is not advised for knotweed as temperatures normally

achieved during the process are insufficient to guarantee destruction of the rhizomes which could result in the further spread of this species. (Bath Spa University 2002).

- 3.3 The full extent of Knotweed infestation in the County Borough is not fully known despite a Knotweed survey and further survey information from a study of the water courses in the County. It is known that on a kilometre grid basis, over 75% of the County has some infestation and the figure is probably much higher as the survey information is based on areas easily accessible or visible from the highway network. Every ward in the County borough has Japanese Knotweed present within it.
- 3.4 The Council receives numerous complaints from the public on a day-to-day basis, primarily concerning paths and drains being blocked, the species invading landholdings and the visual intrusion both of the plant itself and litter trapped in the stands. Community Councils throughout the County borough were actively involved in undertaking the survey of Japanese Knotweed and the issues of infestation and management are regularly raised at Community First meetings.
- 3.5 Research has been carried out into the treatment of Knotweed, notably by Child and Wade, details of which are contained in *The Japanese Knotweed Manual*, which includes a case Study of Swansea. (L. Child & M. Wade, 2000, Packard). Specific research into the control of Japanese knotweed and Himalayan balsam on South Wales riverbanks has also been undertaken by the University of Wales (Beerling, D. 1990). The WDA and Environment Agency also both provide guidance on treatment of invasive species and the WDA also has model tender documentation. This research shows that the only options for eradication are removal from site or treatment in situ by herbicides, both of which are costly and not without problems. Grazing and mowing only partially keep the spread of the plant in check. Trials have shown most effective method to treat knotweed, in situ, is to dig the ground over prior to spraying as this not only reduces the amount of herbicide required but is also nearly 4 times more effective than spraying alone. (Child,L. Wade,P. and Wagner,M. 1998. Leiden). Research is currently underway into the introduction of natural bio-control, i.e. insects or fungi, but this may not prove feasible and, in any event, is some way off. This research partnership led by Cornwall County Council also includes the South West of England Regional Development Agency, British Waterways, EA, WDA, Network Rail and Defra, illustrating the importance attached to the problem.
- 3.6 It is clear that Knotweed is spreading rapidly in the County Borough and, if nothing is done to reverse this, the potential damage to the environment and economy is substantial.

4. ACTIONS WITHIN THE COUNTY BOROUGH

- 4.1 In addition to works carried out by the Forestry Commission and Environment Agency the WDA has invested some £90,000 into Knotweed treatment in the County Borough since 1998 and this is not proving sustainable in terms of treatments, costs and monitoring man hours. Further to this, due to contractual arrangements tied to pro rata payments, it is proving difficult to monitor contractors and ensure successful completion of the works, sometimes resulting in re establishment. This, in addition to concerns over the environmental implications of mass herbicide treatments, has resulted in the WDA becoming reluctant to invest in Japanese knotweed eradication projects on a large scale. Over the past six years, a good indication of the costs of treatment has been gained through tender returns. The actual cost of herbicide treatment is some £3.50 per square metre.
- 4.2 Research by Child and Wade, undertaken during the 1990s, has shown the cost of spraying Knotweed with herbicides is some tenfold cheaper than excavating and landfilling when landfill tax is taken into consideration, giving a cost of over £35 per square metre. The ratio is likely to have increased since this time, given increases in the financial cost to landfill.

- 4.3 Further to the dedicated treatment programme sponsored by the WDA they also fund treatments as part of other stand alone environmental improvements. The Council's Parks and Highways departments also undertake limited management as part of their operations. The planning system is also becoming more proactive in terms of informing developers of their responsibilities where knotweed is present on development sites. Due to the location of many of the works undertaken by CCBC, which are often 'public spaces', only weaker herbicides can be used resulting in treatments having to be undertaken over several years. Significant works within the County borough have been undertaken in Caerphilly, New Tredegar, Bargoed, Ystrad Mynach, Maesycwmmmer, Abercarn and in the northern Sirhowy Valley, predominantly along roadsides. These projects are at different contractual stages and there are varying rates of success. All have resulted in a large scale reduction of knotweed present but it has been noted that the plant is reappearing on some sites.
- 4.4 Having considered the issues and investigated what other local authorities and bodies are doing to combat knotweed CCBC has recently been successful in attracting EU funding for the employment of an Invasive Plant Species Officer. This post will target primarily, but not exclusively, Japanese Knotweed. This post is matched funded by CCBC, the WDA, Welsh Assembly Government and through volunteer hours, mainly sourced through Keep Wales Tidy. The funding package for this initiative amounts to some £160,000 and will run for three years.
- 4.5 The post will not only implement direct treatment controls in identified priority areas (yet to be confirmed) but have an educational role also. The post holder will be required to prepare presentations and meet with Community/Town Councils, Community Partnerships and educational establishments whilst also preparing a range of information and good practice guidance leaflets and other publicity. It must be appreciated that the amount of management that a single officer can undertake is obviously limited in an area the size of a county borough and with the extent of contamination being what it is. It is hoped that the above post will be in position by September of this year.

Author: Philip Griffiths