



Ref: A083733

Sent by email only to: stuart.goodwill@barratthomes.co.uk

19th February 2014

Dear Stuart

Portsdown Hill, Bedhampton: Dwarf Spurge Survey

Background

An extended Phase 1 habitat Survey was carried out at Portsdown Hill, Bedhampton in August 2013 in order to support a planning application for the redevelopment of the site, with proposals to include construction of 47 houses with associated access, parking and open space. As part of the extended Phase 1 habitat survey, information was gathered from the Hampshire Biodiversity Information Centre (HBIC), the ecological records centre for Hampshire, regarding the presence of nature conservation designations and protected and notable species within 2km of the proposed development site. The data search revealed that the proposed development site lies within the locally designated wildlife site, 'Fields off Havant Road' Site of Importance for Nature Conservation (SINC). The SINC is designated under criteria 6A (Sites which support one or more notable species) and 6B (Sites which regularly support a significant population of a species which has a restricted distribution or has substantially declined in population or range. Such sites may be used seasonally or for only one part of a species life-cycle). The designation under these criteria is for the presence of dark bellied brent geese (*Branta bernicla bernicla*) and dwarf spurge (*Euphorbia exigua*). Dwarf spurge is 'Near Threatened' under the IUCN Red List of Threatened Species (IUCN 2001).

Site location and general description

The site is approximately 4.75 ha, comprising the north east corner of a large arable field with horse paddocks in the northeast corner of the site.

The site is located on the western periphery of Bedhampton. The proposed site is approximately 4.75 ha, located directly to the west of Glebe Park Avenue and junction 5 of the A3, Bedhampton (OS grid reference SU 693062) and is designated as a SINC site for dark-bellied brent geese (*Branta bernicla bernicla*) and dwarf spurge (*Euphorbia exigua*). The eastern boundary comprises residential buildings with gardens, beyond which lies the major infrastructure associated with the A27 and A3M. The southern corner of the proposed site borders Havant Road (A2030), and the proposed western boundary intersects the middle of the arable field and hence arable land lies beyond the western boundary. To the northern boundary lies residential development beyond which lies Portsdown Hill Road. In the centre of the northern boundary within a residential garden which lies over the boundary, it is understood that a former chalk quarrying area is present which is now heavily vegetated.

The majority of the site is part of a large arable field, with an area of heavily grazed horse paddocks (improved grassland with scattered scrub and fruit trees) and associated run-down timber sheds occupying the north east corner of the site.

Methodology

The locations of dwarf spurge were mapped by experienced ecologist Tom Ormesher on 27th September 2013 and subsequently updated on 19th November 2013 by experienced botanist Penny Ward. These dates are both within the optimal period for identifying this plant species. GPS was not used as the accuracy was not considered to be sufficient for the detail required. As a result, manual mapping by hand was considered to be the most suitable method of recording individual plants and the location of the plants were marked on the ground by pegs.



Survey results

Dwarf spurge plants were recorded in six separate locations along the northern boundary of the arable field, with most specimens recorded within the boundary of the proposed development site. Along the northern boundary of the development site, along arable field margins, dwarf spurge was recorded in three separate locations. One plant specimen was recorded towards the western boundary of the site. Dwarf spurge was also recorded in high densities at TN2 and TN3, with 45 and 24 individuals recorded in each location, respectively. Outside the site boundary, along the same arable field boundary, dwarf spurge was recorded in three separate locations. Approximately six plants were recorded toward the western boundary of the arable field. One individual specimen was recorded further east and an area comprising approximately 14 plants was recorded closer to the boundary of the proposed development site. **Figure 1** shows locations of the dwarf spurge relative to the proposed development site.

Recommendations

As dwarf spurge is an annual species, associated with arable fields, it persists through annual disturbance associated with arable farming. As such, it is considered that even with the retention of the field boundaries, this species will not be able to persist within the proposed development. Thus, it is proposed that this species is sown and translocated to the boundaries of the arable field, to the west of the development site, which will be retained i.e. not impacted by the proposed development and in which the current management regime of arable farming will persist. Dwarf spurge plants were present in relatively low numbers along the northern boundary of the arable field, outside the development site boundary. Therefore, there is scope for translocation and/or sowing of dwarf spurge from the development site into this area.

Sowing and translocation of dwarf spurge will aim to increase the number of plants present within the area. These processes will require:

- seed collection and appropriate storage;
- preparation of the donor site for translocation;
- preparation of the receptor site for translocation/ sowing;
- sowing;
- translocation;
- and post sowing/ translocation management and monitoring after a period of establishment.

These processes are described below:

Sowing

Dwarf spurge seed was collected during November 2013 and is being stored over winter. Over winter 2013/ 2014, prior to sowing the dwarf spurge, the arable margins where the plant is to be relocated to (the northern margin) will be rotavated and tilled. The main germination period for this species is spring, and so the collected seed will be sown in Spring 2014 and allowed to become established. As a spring germinator it is likely that the seed requires a period of intense cold prior to germination, which is why the dry seed is currently being stored in appropriate conditions over winter. The seed will be sown within an area along the arable field margin, where it is currently absent. The identified location is shown on **Figure 1**. The management of the arable field will continue as before, which will entail regular disturbance of the habitat, allowing dwarf spurge to persist.

Translocation

It is proposed that, in addition to the sowing of dwarf spurge seed, as described above, the dwarf spurge present at the site, and associated seed bank, is translocated to a location along the field margin, where dwarf spurge is currently absent. The identified location is shown on Figure 1. The receptor area for the translocated dwarf spurge will be at a different location along the arable field boundary to where it will have been sown.



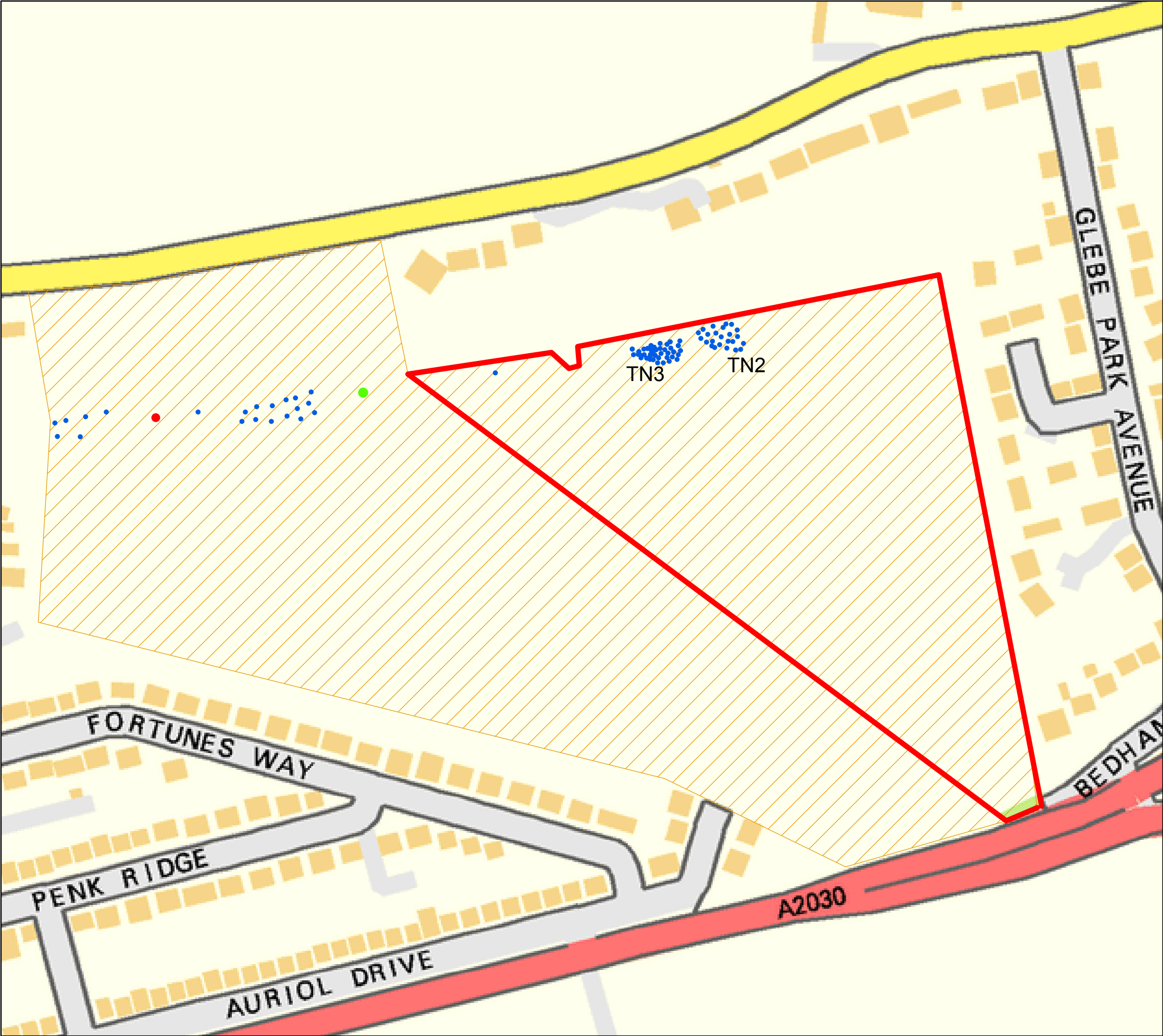
- A tracked digger with a wide bladed bucket will remove the vegetation and soil supporting dwarf spurge as marked out by the survey. Soil to a depth of approximately 500mm will be moved to ensure that as much of the seed bank as possible is translocated.
- The soil and plants will then be placed in a transportation vehicle appropriate for the site conditions and quantity of soil to be moved. It is important to keep the vegetated side facing upwards at all times, and an effort made to preserve the structure of the soil.
- It is anticipated that the donor site will be fenced off from the proposed development site in Spring 2014 and translocation of the seedbed will be undertaken in November 2014, when the annual plants have died back. It is important to avoid the procedure if the ground is dry. This is unlikely, as the procedure must take place during the wettest months of the year, but the areas can be watered prior to translocation if required.
- The receptor site conditions will match the donor site exactly as both sites are within the same arable field. Therefore, it is anticipated that the translocation will be successful.
- The translocated soil from the donor site must be placed at the centre of the pits at the receptor site, with an effort made to ensure that the structure of the soil is disturbed as little as possible and the vegetation side remains facing upwards. Any gaps must be filled in with loose soil and watering can be done if required.
- The receptor site area must then be left untouched until the following Autumn, when normal management designed to maintain site conditions for the arable annual can recommence. Current management, which should continue, comprises sowing of crops in spring and ploughing over winter.
- Monitoring is undertaken for the first two years after the initial translocation and establishment process is completed. Monitoring can be done by repeating the survey methodology described above. This will help determine the success of the translocation procedure but also allow for ameliorative mitigation to be established should it be required, such as reduction of aggressive weed cover or soil erosion. Longer term monitoring is recommended in partnership with local volunteer conservation organisations.

Please do not hesitate to contact us if you wish to discuss this further.

Yours sincerely,

Vicky Coulthard
Senior Ecologist
For and on behalf of WYG

Clare May
Principal Ecologist



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Legend

- Site boundary
- SINC designated for Brent geese and dwarf spurge
- Locations of Dwarf Spurge
- Receptor location for translocated dwarf spurge
- Location for sewing of dwarf spurge



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WYG Planning & Environment

Portsdown Hill, Havant

creative minds safe hands

Dwarf spurge

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		EH 23/01/14	VC 23/01/14	CM 24/01/14
Project No:	Office	Type	Revision	
A083733	45	94	Figure 1	

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