

Kidney Vetch Translocation Addendum

Project number 60605215	Client Swansea University	Subject Swansea University Bay Campus Centre for Integrative Semiconductor Materials (CISM)	Date 30 June 2020
Reason for issue An addendum to the issued ecology reports regarding the translocation of kidney vetch plants on Site	Prepared by Ursula Jones	Checked by Kevin Webb	Issued by Ursula Jones

Introduction

AECOM was instructed by Swansea University to prepare an addendum to the issued ecology reports regarding the translocation of kidney vetch plants to facilitate the Swansea University Bay Campus Centre for Integrative Semiconductor Materials (CISM) development (the Site).

This addendum has been produced for the following reports:

- Swansea University Bay Campus Centre for Integrative Semiconductor Materials (CISM) Preliminary Ecological Appraisal. AECOM, July 2019;
- Swansea University Bay Campus Centre for Integrative Semiconductor Materials (CISM) BREEAM Ecology Report. AECOM, February 2020; and,
- Swansea University Bay Campus Centre for Integrative Semiconductor Materials (CISM) Landscape and Habitat Management Plan (LHMP). AECOM, February 2020.

Kidney vetch was recorded on Site in areas of ephemeral short perennial. This is the larval food plant of the small blue butterfly. The small blue butterfly is present as eggs or larvae on kidney vetch at all times of the year (UK Butterflies, 2019). Eggs are laid in summer, if the plant is moved over summer there is the potential for the eggs to be damaged or destroyed. The larva over-winter in the roots of kidney vetch, if vegetation is cleared during winter, there is potential for killing of small blue butterfly larvae.

The kidney vetch was due to be translocated on Site in late-March 2020. However, due to a global pandemic (Covid-19) and the lockdown of all non-essential services in the United Kingdom from 23 March 2020 it was not possible to undertake the translocation before the end of March. Additionally, the construction timetable of the CISM project has been affected due to the lockdown.

Construction activities are now due to commence in August 2020. Therefore, it is not possible to translocate the kidney vetch in winter.

This addendum provides the revised methodology for the translocation of kidney vetch outside of the winter period to maintain the population of small blue butterfly within the Swansea University Bay Campus.

Translocation of Kidney Vetch

The Swansea University Biodiversity Officer has conducted an inspection of the kidney vetch on Site in June 2020 (pers. comm., 2020) and advised that the plants have been adversely affected by the dry weather and lack of management during the lockdown period; a number of small blue butterfly caterpillars were observed on the surviving plants' flowerheads.

Establishment

The kidney vetch plants will be moved during summer 2020 (prior to construction commencing) following these actions:

- The Swansea University Biodiversity Officer will identify locations of kidney vetch specimens within the Site. The locations will be marked with small flags (or similar).
- The Swansea University Biodiversity Officer will identify suitable locations on the receptor site to translocate specimens. Nutrient poor disturbed ground provides ideal growing conditions for kidney vetch. Any nutrient rich topsoil will be removed prior to translocation and subsoil mixed with 50% rubble (crushed lime, railway ballast, road waste (excluding tarmac) etc.).
- An appropriate landscape management contractor will be appointed and to undertake translocation of specimens and the Swansea University Biodiversity Officer will supervise translocation of specimens.
- Under the supervision of the Swansea University Biodiversity Officer the kidney vetch plants will be lifted using a spade and placed into a tray to capture any caterpillars that may be dislodged from the plants' flowerheads. Turfs will be dug around the kidney vetch making sure the whole root is included and no damage to roots occurs.
- Following removal, the plants will be moved immediately to the receptor area and immediately planted and watered in. Any dislodged caterpillars that have been caught in the trays will be gently placed back onto flowerheads that have not yet dried up.
- The marking, lifting, manoeuvring and watering will be undertaken carefully to avoid dislodging the caterpillars as much as possible.
- The locations of translocated kidney vetch will be clearly marked on a plan and provided to the grounds staff.
- The plants will be regularly watered during establishment to help ensure survival.

Enhancement and Management

The Swansea University Biodiversity Officer has identified mounds adjacent to the receptor area that are suitable for supporting additional areas of kidney vetch. These will be sown with kidney vetch seeds (either purchased or collected locally) thereby enhancing the wider Bay Campus site for the small blue butterfly.

The management of the receptor area and any newly created areas of kidney vetch will follow the management prescriptions as set out in the Swansea University Bay Campus CISM LHMP (AECOM, February 2020)

Conclusion

The actions described above will maintain and enhance the population of small blue butterfly within the Swansea University Bay Campus.

References

AECOM (2019). Swansea University Bay Campus Centre for Integrative Semiconductor Materials (CISM) Preliminary Ecological Appraisal. July 2019.

AECOM (2020). Swansea University Bay Campus Centre for Integrative Semiconductor Materials (CISM) BREEAM Ecology Report. February 2020.

AECOM (2020). Swansea University Bay Campus Centre for Integrative Semiconductor Materials (CISM) Landscape and Habitat Management Plan (LHMP). February 2020.

Swansea University Biodiversity Officer Personal Communication (2020). Email (Moving Flora Industria) dated 17 June 2020.

UK Butterflies (2019). Small Blue Butterfly <https://www.ukbutterflies.co.uk/species.php?species=minimus> Accessed 08/07/2019.