

TROWBRIDGE MAWR RESIDENTIAL DEVELOPMENT, CARDIFF



LOCATION:	TROWBRIDGE MAWR, CARDIFF
CLIENT:	CARDIFF COMMUNITY HOUSING ASSOCIATION
COMPLETION:	ONGOING
VALUE:	£6.5M
SIZE:	34 HOMES
SERVICE:	ARCHITECTURE, LANDSCAPE ARCHITECTURE
SECTOR:	RESIDENTIAL
LANDSCAPE:	AUSTIN-SMITH: LORD
STRUCTURES:	SMART ASSOCIATES
SERVICES:	DRAC CONSULTING
COST CONSULTANT:	BLAKE MORGAN



Austin-Smith:Lord were appointed by Cardiff Community Housing Association to develop a design for 34 new-build social rented homes at land off Trowbridge Road in Cardiff. Located alongside the unique context of Gwent Levels’ Site of Specific Scientific Interest, the scheme design creates a place with a strong sense of identity defined by its positive and sensitive relationship to its natural setting.

The layout of the development will provide most homes with views over the pleasant greenery of the preserved and enhanced wooded areas and hedgerows as well as the newly created green open space featuring a pond and stretches with native species of reeds and grasses.

The buildings’ orientation, south-east or south-west, is specifically chosen to balance efficient solar energy capture close to peak energy usage times in morning and late afternoon whilst reducing the risk of potential overheating within the homes. Alongside the potential for generating electricity it is proposed that the new housing be targeted as being low energy use homes. There are a number of simple, good practice passive design strategies that were deployed in the initial design stages to help reduce the potential energy use such as spacial allowance for a low u-value building fabric, choosing building elements and junctions with potential for higher levels of airtightness and inclusion of Air Source Heat Pump system.

The large areas of preserved ecology on the site will enhance the character of the development bringing about a sense of a waterside parkland setting nurturing a positive relationship between built environment and nature.

A simple palette of robust natural materials and the smaller mass of the housing will further aid the development’s integration within its green locale. Earthy tones mix brickwork and traditional gable forms will bring about a vernacular farmstead appearance that compliments and blends with its settings. Through the specification of materials and details which require low maintenance during occupation, replacement intervals are extended and waste generation associated with building maintenance and upkeep is also minimised.

The scheme will be energy efficient and achieve EPC rating A. The direct private garden access to each property and a good provision of a secure cycle storage across the development will create more sustainable travel options for the residents.

Potential solutions for home workstations feature in the individual home layouts.

At the centre of the development a series of rain gardens and planting beds with formal planting have been proposed. These are pockets of soft landscaping forming a chain around the proposed carriageway and footway. The existing vegetation in the development will form a green corridor with the rain gardens and planting beds. The SuDS strategy is fully integrated in to the placemaking. This synergy culminates with a feature attenuation pond. The pond and rain gardens together will strengthen the green and blue infrastructure; fortifying the development’s capacity to precipitation, building resilience for the unprecedented times of climate change and maximising the opportunities for the environment.



01 NATURAL HABITAT ‘RIBBON’
RETAIN AND ENHANCE ECOLOGY ON SITE, PRESERVE WILDLIFE HABITATS LINKAGES



02 CONNECTION TO NATURE
HOUSING FACE GREEN AREAS TO ENSURE VISIBILITY THROUGHOUT THE DEVELOPMENT AND MAXIMISE ENJOYMENT OF THE NATURAL LANDSCAPE



03 MOVEMENT ‘LOOP’
THE ROADS LAYOUT IS BASED ON A VERY SIMPLE LOOP AND DEAD ENDS HAVE BEEN COMPLETELY AVOIDED. PUBLIC LINK THROUGH THE SITE TO GWENT LEVELS IS PRESERVED AND IMPROVED



04 SUSTAINABLE DRAINAGE INTEGRATED INTO PLACEMAKING
THE DRAINAGE STRATEGY WILL INCORPORATE SITE-WIDE RAIN GARDENS, SWALES AND A FEATURE ATTENUATION POND. THEY ARE EMBEDDED WITHIN THE SCHEME AND ARE USED TO HELP DEFINE THE CHARACTER OF THE DEVELOPMENT.

