

Social Housing Development- social rent

Construction of Soakaway on Salisbury City Council land

Executive Summary

This briefing note sets out the details of a request to Salisbury City Council by Wiltshire Council for the granting of permission to construct a below ground soakaway on the City Council owned recreational ground.



Figure 1- The Recreation Ground at Westwood/ Rawlence Rd, Salisbury

The request arises from proposals developed by the Wiltshire Council House Development Team (CHDT) as part of the CHBP (Council House Build Programme). The proposals relates to a former garage site at Rawlence Road and would facilitate a suitable, sustainable, and effective stormwater drainage solution for the development.

The space is zoned recreational open space and if the proposal were accepted, and permission were granted to Wiltshire Council by Salisbury CC, it would in no way interfere with current use. The soakaway is a buried 'tank' or below ground void filled with what appear to look like empty crates or crushed stone. Recreational Activities on the surface and the use of agricultural equipment to maintain the grounds can continue and vegetation will be as existing with the soakaway grassed over.

Recently trees have been planted on the rec and these can be maintained by siting of the below ground tank in the extensive area in a suitable location. Future trees can be added and WC would propose as part of the soakaway installation to compliment the existing tree planting scheme if required, subject to the City Councils requirements and approval.

INTRODUCTION

This report details the benefits of the scheme for social housing, at social rents, the need, and the situation triggering this request. Details of compensatory measures and construction are also explained. On balance the inclusion of a soakaway has little if any detriment to the land and its use. It is more likely the recharging of storm water, (which would otherwise be run off down the road) , into the subsoil as nature intended is beneficial to the ecology and avoids drying out of the ground, allowing better tolerance of drought periods for the trees.

The benefits of the housing scheme is that it provides six units , 4 No. 1 bed self-contained flats, and 2 No. 2 bed semi detached housing which would be let at social rents. With over 4,000 families in the County, many in Salisbury, on the housing waiting list the scheme would make a small and useful contribution, particularly as rents would be social and not affordable rates. The dwellings would meet or exceed current standards for energy use and conservation, with a target of net carbon in use. The dwellings would be heated with ashp (air source heat pumps) and have PV. The housing would be available for ex-military people.

As part of the design development and following site investigations the options for conventional soakaways is not possible and ruled out, as explained later. A solution, based on similar circumstances and ground conditions is now proposed based on best practice CIRIA and other relevant standards. **See ref 1.**

As part of any development sustainable method of storm water disposals are imperative. Wherever possible SuDS (Sustainable Urban Drainage Systems) are incorporated into the schemes development by the CHDT as this is best practice. In relation to the Salisbury area which is very susceptible to flooding in the City and sits on or alongside the flood plain this is an imperative.

Traditionally developments have collected stormwater from the site, roofs, hard standings, roads and piped into the nearest river or water course. With the onset of the effects of climate change, the direct collection and discharge to rivers increases the risk of immediate flooding to the water course with serious implications for flooding.

The country's river network system has developed over centuries in response to natural drainage, eco-systems, with the ground and vegetation attenuating the flow. Some rainfall seeps into the ground providing water for trees and vegetation and recharging underground aquifers for water supply. A piped drainage system discharging stormwater within minutes of a storm event occurring not unsurprisingly exacerbates flooding of rivers and flood plains. SuDS is not new or novel it has been used in parts of the world for 40-50 years and in the UK for over 30 years -the purpose is to put the water back into the environment avoiding run off.

Recent storm events, rainfall in general, and consequential flooding has resulted in a re-think of the design standards and allowance we make for storm water. We are now designing for storm events which would occur once every 100 years plus 45% and assuming two such events within days. This is a considerable volume of water.

PROPOSED DEVELOPMENT - RAWLENCE ROAD, Salisbury



Figure 2- Proposed development at Rawlence road, Salisbury-Former Council House Garage site.

Rawlence Road, Salisbury is a former council house garage site, now cleared to forecourt level. The proposal is to utilise the site for a total of six new homes for social housing. At present the entire area is impermeable with tarmac and concrete.

The site sits alongside former council housing stock disposed of under RTB over 20 years ago, and a Nature Reserve.

The site is on the boundary of a housing development (1950's) and abuts a nature reserve.

The site is in poor condition with scrubby vegetation used for restricted access to the rear of several properties for pedestrian use and vehicles. It has also become a meeting place with anti-social behaviour, fires, and smoking. The site has a barrier gate which is locked by the residents.

Local Councillors have raised concerns about the site and the possibility of developing and have been encouraging and supportive. The immediate residents on the boundary of the development site are very supportive of a development which utilises the site and provided them with a reasonable and safe access for pedestrians and vehicles. Many of the residents access garages at the rear of their properties and the scheme addresses the vehicular accessibility. They are very keen on seeing the development illustrated above delivered. It would enhance their properties and removed opportunities for anti- social behaviour and enhance their security.

The site has been looked at several times over many years for development and we appear to have a workable scheme if we can resolve the issue of stormwater. Salisbury CC have been consulted previously and have transferred a piece of land at the front of the current site to WC to allow the construction of a new access if the project proceeds.

Grant funding from the Brownfield Land release Fund has been secured for the development of over £80,000.

The basis of the project is to employ MMC (Modern Methods of Construction) to provide 4 no. 1 bed 2 person units arranged as apartments/flats in 2 storey units under a tiled roof, together with 2 No. 2 bed, 4 person houses arranged as semis under a tiled roof.

Key project data:

GFA 392 sq.m all units

Total Project Value £1,880,000, including contingency, clients' costs, and fees, ex VAT

SOAKAWAY OPTIONS AND DESIGN

Design development has included an intrusive Site Investigation which undertook soil sampling at depth, and laboratory testing. The Site Investigation revealed chalk at about 600mm below ground level under made ground or a gravelly / brash material. Test results have indicated that the chalk is susceptible to dissolvability and soakaways are workable but the guidance and codes requires that soakaways in this material are 10m from roads, and all buildings.

Owing to the limited size of the site the 10m rule makes it difficult to provide a large enough soakaway and meet the rule. We are therefore seeking permission to construct a soakaway across the road from the site in the recreational ground. We could forego 2 of the 1 bed flats to accommodate the soakaway on the current site but that makes the development unviable financially.

The soakaway is a buried 'tank' or below ground void filled with what appear to look like empty crates/ perforated boxes; they are strong enough to support the ground and current use. Recreational Activities on the surface and the use of agricultural equipment to maintain the grounds can continue and vegetation will be as existing with the soakaway grassed over. The siting needs to be considerate of existing trees but as the tanks are sources of recharging rainwater into the sub soil tree roots will often migrate towards the soakaways . We can accommodate a soakaway within the available land and allow for the existing mature trees and the slope. An alternative to the empty grates is to fill the ground with crushed stone but that is regarded as less sustainable as it involves considerable volumes of natural stone.

Recently new sapling trees to accommodate the existing have been planted and they will not be affected

The soakaway draft design is shown below, Figure 3.

PHASE 2 (PRIVATE)							
MN No	MANHOLE DIAMETER (mm)	MANHOLE TYPE	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)	NORTHING (m)
HEADWALL	—	HEADWALL	88.550	88.605	0.055	411820.011	131420.362
SW MP0	400	Type E	91.379	90.707	0.672	411816.686	131422.776
SW MP3	400	Type E	91.376	90.484	1.242	411822.238	131430.340
SW MP4	450	Type C	91.333	91.213	0.420	411827.808	131426.758
SW MP7	300	Type E	92.452	91.840	0.612	411844.266	131426.311
SW MP9	400	Type E	92.498	91.701	0.983	411838.820	131434.350
SW MP11	400	Type E	91.333	90.567	1.232	411841.978	131448.433
SW MP12	450	Type E	90.582	88.032	1.400	411844.263	131411.025
SW MP13	400	CATCHWATER	90.385	88.688	1.199	411832.334	131468.307
SW MP4	150	Type E	92.361	91.181	1.180	411855.663	131423.176
SW MP6	300	Type E	92.042	90.527	1.385	411842.751	131427.027
SW MP8	400	Type E	91.631	90.351	1.280	411834.463	131436.057

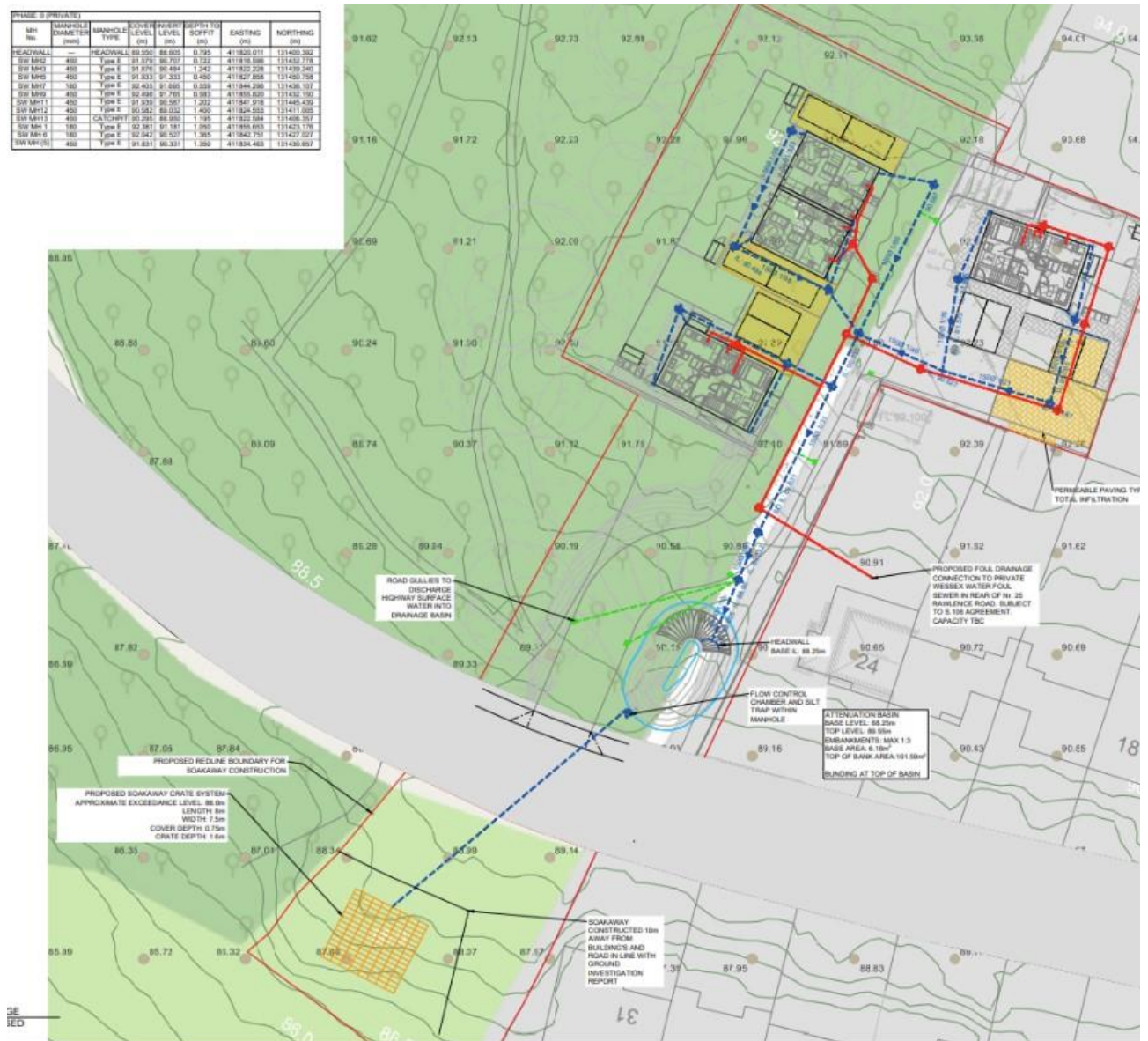


Figure 3- Proposed Soakaway

Summary

Wiltshire Council request consideration be given by Salisbury CC to the granting of permission with an easement for the construction and maintenance of a soakaway and associated pipework on the recreation grounds at Westwood/ Rawlence Road, Salisbury.

Wiltshire Council would cover any professional fees (initially up to £2,000 plus VAT) subject to review and development as the agreement progresses. Compensation measures, i.e. additional tree planting on the site and diminution of value to be agreed.

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1. Extract for Wikipedia

Sustainable drainage systems (also known as **SuDS**,^[1] **SUDS**,^{[2][3]} or **sustainable urban drainage systems**^[4]) are a collection of [water management](#) practices that aim to align modern [drainage systems](#) with natural water processes and are part of a larger [green infrastructure](#) strategy.^[5] SuDS efforts make urban drainage systems more compatible with components of the natural water cycle such as [storm surge](#) overflows, soil percolation, and bio-filtration. These efforts hope to mitigate the effect human development has had or may have on the [natural water cycle](#), particularly [surface runoff](#) and water pollution trends.^[6]