Climate Change

Supplementary Planning Document

Consultation Responses - Sept. 2022

Rossendale
BOROUGH COUNCIL

Photo Credit: Bev McGregor

Introduction

The six-week consultation on the Climate Change Supplementary Planning Document took place between Wednesday 13th July 2022 and Wednesday 24th August 2022. During this time, 21 respondents made comments, 11 of which were from residents, 6 from statutory consultees, 3 from developers and 1 from a Councillor.

The responses received have had any personal contact details redacted and have been reproduced in full and combined within this document. The following table shows the section of the SPD addressed in the responses, who made these responses and whether anyamendments are proposed.

Themes mentioned in the responses received include; the importance of tackling Climate Change, some housing sites having a negative environmental impact, concerns over the location and efficiency of on-shore wind farms, the importance of active travel and several technical comments made by various statutory consultees.

The responses will be considered and, where appropriate, changes will be made to the SPD to incorporate these suggestions before formal adoption of the document.

Table of Contents

FAO: Forward Planning Team, Rossendale Borough Council

Thank you for inviting National Highways to comment on the Council's draft Climate Change SPD.

There are no aspects of the draft SPD that we would seek to challenge and, in general, support the initiatives set out within the SPD. We would though comment that:

- Recognising that demand for road transport will continue, development should be encouraged promote modal shift as much as possible, whilst minimising the need to travel / travel longer distances.
- The Local Plan may need to consider policies to enable any infrastructure associated with zero-carbon monitoring in the future.
- Where development may affect use of drainage infrastructure that crosses under the strategic road network that we operate, it is vital that applications can demonstrate that surface water runoff from sites can be accommodated within the design capacity of any culvert(s) affected.

If you would like to discuss anything about this email, please contact me.

Kind regards,

Warren Hilton, Assistant Spatial Planner
[redacted]
Web: www.nationalhighways.co.uk

Dear Rossendale Council,

Although the premise of the draft report is welcome, as usual with Rossendale and Lancashire Councils the physically disabled are actively discriminated against in favour of new technologies.

As an example, despite the plans for Bacup in 2040 there is no provision for additional disabled parking anywhere within the town centre. There is excessive provision for Private High Taxi's with no clear plan to ensure the change from diesel to green power for this service. For the disabled there are only two designated parking spaces (Tower Street) that are wholly unsuitable for disabled shoppers. This kind of discrimination actual encourages disabled shoppers to leave the valley for their shopping, thereby having a negative effect on the proposals.
See - "Policy TR4: Parking
Incorporating charging points for electric vehicles in new parking areas can encourage the uptake of electric vehicles and help achieve a number of associated environmental benefits, including reduced contributions to climate change and improvements to air quality (para 316)."

Unfortunately, there is not any consideration for disabled people. One example is the enhancements to Union Street that for a disabled person there are no designated dropped kerbs. What is there is used as a parking place for vehicles that force people into the road which is a major bus route. Another example is where shop owners 'extend' their shop displays onto the public pavement which removes parking space for disabled motor scooters of wheelchairs. This discriminatory practice is condoned by both Rossendale and Lancashire County Council.

There is no public defined responsibility between the two Councils as they always refer the complaint to each other so there is never any resolution. This most be dearly addressed in any future proposals.

All told the whole of the report does not address the needs of the disabled resident or visitor. If plans are to be formulated please include a disabled person so that their needs are addressed. If a non disabled person makes a provision it is normally done from a check list.

Many thanks,
Peter Brown
[redacted]

Many thanks for this opportunity to participate in the consultation.

In my opinion it is comprehensive and should prove useful to developers and planning department also help people who might be thinking of objecting to a planning application.

I wish to object against the proposed building development on land between Grane /Holcombe Road, behind the Holden Arms . Tthis land is very important for wildlife but also for drainage of rain water, especially with climate change beginning to effect the U K .
Yours sin Gill Rothwell

From David Cooper, [redacted]

I write about Rossendale's Climate Change S.P.D..I see that the draft document is longer than 50 pages, we are indeed into it deeply!

This rate-payer is what you may describe as a 'flat-earther', or a 'denier'. I could ask for your evidence that we are in a Climate crisis and that extreme weather events are more frequent, or that the trace life-giving gas CO2 has any effect on Climate, but that will just waste time. So let's make some relevant comments:

1. Please do not gamble away the rate-payers' money like the councils of Thurrock, Bristol, Nottingham and Portsmouth. They have lost, (in £ million) 655, 46, 23 and 3 million pounds respectively by investing in Green projects.

2. Those small pm2.5 particles. Some from the exhausts of old diesel engines, most from wear on tyres, brakes and road surfaces. Electric vehicles, with their heavy batteries, are very big offenders. Perhaps follow the practise of Sweden who wash down their roads frequently to keep the dust down. Road sweepers can throw up vast amounts of dust containing these small particles. I watched one in action last week on Campion Drive - and we confirm this by the windows which became filthy overnight. A check that all sweepers operate with dampeners might help.

3. The household support fund that you mention is a good idea. A recent poll amongst Conservative party members was quite shocking since they did not think that supporting Net-Zero policies was a significant vote loser. So, a short rehearsal - NZ is currently costing each household in the UK £2,000 each year and this will increase. Country needs to keep the Grid on and the wind stops. Gas is burnt to compensate and other countries bid for the same gas, prices rocket and so do our household energy bills. (By contrast China uses ever-increasing tonnes of coal, giving them the cheapest energy, a more competitive industry and many more jobs.)

4. No more wind turbines please, they don't work. In passing, we are quite privileged in Rossendale where we can all see them in action and they are often still.
David

I sent an email on this on Friday july22nd. I forgot to add the following point:

5. Again on pm2.5 particles
A major source of the pm2.5 particles come from the burning of wood, a process which also gives low levels of nitrogen dioxide gas. (When covid peaked and fewer vehicles used our roads we wondered why the pm2.5 and NO2 levels remained high.) In an ideal world polluting wood-burning stoves would not be allowed.

Thanks again
David

Gary Cunliffe
[redacted]

hi im replying in regard to the consultation. i have a few points il list below.

Housing stock.

rather than waiting for whatever the government do maybe you should be bold and demand all new builds come pre installed with solar panels, a power storage battery, air source heat pump, underfloor heating AND a ev charge point where as well as a full sized drive so people can stop blocking roads. i know its a lot but if you did this it would greatly improve new housing stock within the valley as well as push the up the replacement of fossil cars with ev's.

Cycling.

first up sort out the mess that is the valley of stone route, it needs to be as near as possible 100% of road as possible to encourage safe commuting in the morning for everyone from adults down to primary school aged children where viable. the current route has some horrific sections where it just spits you on to a main road with no sign posting whatsoever. one section in waterfoot you have to go through a factory's loading dock and then scramble up a mess of stone and mud, and if you are coming the other way you just get to risk joining and crossing the main road from bacup to rawtenstall on a corner ?!

iv suggested it before but maybe have a off road trail from end to end of the valley, we have rooley moore road from rochdale how about do one going up the other side between whitworth/littleborough up to the top of tod rd bacup and then on to crown point and on to rising bridge, could have drop off points in to whitworth, shawforth, britiania, bacup, waterfoot as well.

as for expanding on the route a loop in to bury as well as accrington for commuting would seem sensible as well as a burnley, although that would be more for leisure riders than commuting as climbing up any of the routes is a slog up hill and not fun.

maybe finally sort out the trailhead centre at lee quarry with ride on after you guys, yes YOU GUYS moved the goalposts years ago and screwing it all up.

other possible expansions for cycling could be school routes to high schools as to encourage them to ride in and lessen the rush hour traffic and heavy bus useage at specific times of the day.

Public transport.

Following on from adding cycling school routes to try and sort out rush hour, maybe have talks with rossobus about adding a couple extra buses when schools are in between 7am and 830am each way on the 464 route because currently they are standing room only most mornings once they get out of bacup heading to rawtenstall. also try and figure out how to

encourage more parents to put their kids on buses rather than driving them in, as the roads at whitworth high and the grammar school are a right mess in the mornings.
just doing that would go a long way to improving air quality through various pinch points at rush hour.

Improving the council.

now a fun one, first up. TURN THE LIGHTS OFF inside of futures park at night and weekends, god only knows why half the offices seem to be lit up at 6pm ot later when no one is there.

next up solar panels and battery power storage at futures park and henrietta st depot, even if the council doesnt end up with a fleet of electric vehicles just yet, having them pre installed would cut down what you pay to electrical companies, and who knows you may even be able to sell some back over weekends.

on electrical vehicles a couple could be replaced now by ev's be it the gardening guys or the street cleaning cage vans as they only do limited mileage so as long as people remember to pop them on charge in the evening there should be no issues, and no im not saying change them today but when they are up for renewal do the math and see how a ev would stack up against what you would normally buy.

one final point, please for everyone who lives in the valley keep this out of the hands of the councillors otherwise it will turn in to a political farce once more with people playing games to score points or to stick the boot in to others.

I am writing in response to Rossendale's invitation to comment on the emerging SPD and, in particular, the policy comments on Wind Turbines.

I have three main points to raise:

1. Upland Moorlands and the existing Scout Moor Wind Farm

The destruction of the developed areas of Scout and Rooley Moors is well documented. The effect on wildlife, the destruction and permanent loss of vast areas of valuable carbon capturing peatlands and the destruction of areas of the moorlands by illegal traffic accessing the uplands via the wind farm network infrastructure is irreversible. There are no acceptable decommissioning terms that will ever restore the moorlands to predevelopment condition. It is unthinkable that the existing development would be accepted today but we must learn from the mistakes of the past and ensure that there is no extension to the existing wind farm as was proposed by SMWFEL and Coronation Power Ltd

This submission does not specifically address the findings that the Net Zero policy comes at a significant cost to families - over £2000 per annum, nor does it address the point that the contribution by any extension of the wind farm is so completely insignificant as to be universally useless but they are important points. It is easy to be swayed by the evidence promoted by the media about global warming but Rossendale must be careful about the extent of its potential contribution to what is a worldwide problem. The planning balance must be considered extremely carefully here because there is much to consider.

Everyone has been affected by Covid. One of the positives to emerge from the crisis has been the availability and accessibility of our open spaces where it is still possible to find solitude, peace of mind and (without wishing to be too poetic) to listen to the skylarks in Spring and the curlews and other moorland birds that we are lucky enough to provide a home for. Living on the Pennine Bridleway, it has become very noticeable that there has been a very significant increase in the numbers of equestrians, walkers, runners, mountain bikers and other bridleway users who have discovered that Rossendale and Rochdale have responsibility for protecting this wonderful, accessible asset. It is not overstating the point by saying that this amenity Common Land has been the saviour of many souls over these past two or three years.

2. Peatland and Carbon Capture

The Council's current policy is to refuse any development on areas of deep peat and I fully support that policy. I am not aware that Rossendale have undertaken any specific peat mapping exercise but, turning to the documents submitted by SMWFEL in support of their application to extend the existing 26 turbine windfarm, it is clear from the peat mapping exercise undertaken on the Applicant's behalf by Penny Anderson that any expansion of the existing wind farm would be extremely damaging.

I do not pretend to be an expert on the subject of carbon capture but I am swayed by all the anecdotal evidence and the information available all of which emphasises that peat is an important environmental asset which must remain undisturbed. Once damaged, areas of

deep peat will never be restored, ever. Rossendale was culpable in its acceptance of the extension application by SMWFEL . Rossendale could see no further than the financial advantages of development and, fortunately, the application was refused by the Secretary of State. This mistake must not be repeated. In my opinion, Rossendale is in a somewhat privileged position as an effective guardian of our areas of peatland (deep or otherwise) and I urge officers to afford this privilege some serious thought. Peatlands are rare, fragile and valuable and I would respectfully suggest going further than resisting all aggressive development in our upland peat areas. Rossendale should engage with other partners to develop a programme to permanently protect our moorlands to ensure that they remain as they are for future generations. I am aware of such initiatives as will be Rossendale

3. The Conclusions of the Secretary of State and The Planning Inspectorate regarding SMWFEL

The final recommendations by the Planning Inspectorate (following the public inquiry in 2006) and the decision by the Secretary of State together with the huge volume of information provided by an overwhelming number of objectors are all on public record so are not repeated here. All that needs to be said is that nothing has changed. All of the reasons why the expansion application was refused are still there today but with the added knowledge that there is indeed a significant cost to the taxpayer and that the contribution of onshore wind energy is not as significant as was thought. There is also a realisation that the damage to green belt, or moorland, or Common Land is very significant, very permanent and inadequately addressed by planning requirements. It is not lost on local communities that Rossendale went against the wishes of its residents, its elected Member of Parliament, The Secretary of State and The Planning Inspectorate and its neighbouring Borough Rochdale MBC when it approved the SMWFEL expansion application. This must not happen again.

I would be very grateful if you will acknowledge receipt of this consultation proposal and ensure that its contents are clearly visible on the Planning Portal

Thank you.

John Newcombe
[redacted]

DRAFT ends

Dr Chris Woods
[redacted]

11/8/2022

Consultation Draft on Climate Change Supplementary Planning Document
ENV7 Wind Turbines

Dear Sir or Madam,

I am a retired GP and live near Ramsbottom and would like to respond to the above document.

I submitted evidence to the Rossendale Local Plan Hearing on 27/8/2019 and attended the Hearing on the morning session of Wed 2nd October, when **Matter 16 – Environment [ENV1-ENV10]** was discussed**.**
The summary of my evidence at that time was as follows

The Rossendale Local Plan has much to recommend it. It has been a wide ranging, careful and detailed submission. The areas I have concerns about are the following: -

***1)** Whether the Plan can adequately protect the health and wellbeing of the population with respect to AM noise nuisance (from wind turbines) and the loss of the openness of the Rossendale Moorland.*
***2**) The failure to include Waugh's Well as a heritage asset/historic environment.*
***3)** Whether the Plan can effectively protect sky-line development if wind turbines are erected.*
***4)** Wind turbine development would lead to important peat and blanket bog loss and an increase flood risk.*
***5)** The inconsistency in the Plan in that areas of wind turbine development have been allocated where the peat and blanket bog is probably the deepest. In line with Natural England recommendations no development should take place on peat with a depth greater than 40cm and on blanket bog. It is essential that this limit is kept in the list of Criteria to be met before development can go ahead.*
***6)** The Ministerial Statement of 2015 is particularly important that, in line with the Written Ministerial Statement of 2015, the planning impacts identified by the affected local community are fully addressed and the proposal therefore has their backing. This must be included in the list of criteria that have to be met, not just in the Explanations at ENV7 198.*
***7)** To conclude the clearest way to address these various points is to prohibit wind turbine development altogether on the Rossendale Moors.*

All of the above remains relevant with respect to **ENV7 Wind Turbines** in the present Consultation Draft on Climate Change Supplementary Planning Document 2022. In addition to my comments above, I would like to make the following points: -

The warnings of the detrimental effects of climate change have been there for many years but it is only recently that the world has experienced them first hand.

Devastating fires, floods and drought and high temperatures never experienced in our life time. Climate change is an emergency and we have to deal with it effectively. We all need to do what we can here and the Rossendale Draft Climate Change Document 2022 is timely.

The points I raised in my 2019 submission to the Local Plan remain the same but I believe are more pertinent now with respect to **ENV7. Wind Turbines** in the Draft Climate Change Document 2022, in particular the growing recognition that peat and blanket bog is of the utmost importance with respect to carbon capture and storage.

In Oct 2021 Natural England published their important **Research Report NERR094 on Carbon storage and sequestration by habitat: a review of the evidence (second edition).**

In the Executive Summary at chapter 4 we have

***Chapter 4**: **Blanket bogs, raised bogs and fens** – peatland habitats hold the largest carbon stores of all habitats. When in healthy condition they sequester carbon slowly but are unique in that they can go on doing so indefinitely. Peatlands in England have long been subjected to damaging land use, resulting in them becoming a large source of greenhouse gas emissions, releasing carbon previously stored for millennia. Restoration interventions in many cases will reduce these emissions, allow biodiversity to recover, increase peatlands resilience in the face of a changing climate and provide a range of benefits for people and society. Restoring the carbon sink function of peatlands is possible though may take decades depending on the initial level of damage to a site. Restoration actions include blocking drains, stopping burning and removing forest plantations.*

It is clear from this that we should not disturb blanket bog and peat in any way and we should do out utmost to restore it in order to both increase carbon capture and decrease carbon emission. The Natural Trust are doing extensive work on Holcombe Moor in order to restore the blanket bog and peat.

In the Rossendale Climate Change Draft, the areas designated for wind turbine construction are on deep peat.

In my 2019 Submission to the Draft Rossendale Local Plan, I stated that

In respect to the impact of the construction of a wind turbine on the moorland, a 100 ft. wind turbine requires a foundation of 225 cubic metres of concrete and 32 tonnes of steel reinforcing. This together with the required tracking will significantly impact on peat and blanket bog, affecting water retention and run off and is likely to increase the chance of flooding. Peat will be reduced as will the carbon capture by the peat so increasing global warming. Ref Appendix 1

All the other points I made in my 2019 Submission to the Draft Local Plan remain the same but are more urgent in particular the pandemic has demonstrated how import the wild open spaces of the moorland around Manchester have been for the wellbeing of the population. The moorland needs to be preserved not degraded by wind turbines whose construction would not only reduce carbon capture but increase carbon release.

There should be no wind turbines built on the Rossendale moorland and schemes need to be urgently put in place to restore the blanket bog and peat in these areas similar to the work taking place on Holcombe Moor.

I respectfully ask that my comments raised at the 2019 Hearing and the additional ones raised in this submission are taking into account with respect to the Draft Climate Change Supplementary Planning Document.

Many thanks

Yours sincerely

Dr Chris Woods

Good afternoon

I read your Climate Change Supplementary Planning Document with interest, and I have some comments to make and some suggestions that you may take into consideration.

I am interested in the preservation of our Green Spaces and our Countryside and while I appreciate the need for housing, it is not only important that we ensure new homes are environmentally friendly but wildlife friendly too. We have encroached onto green spaces and our countryside exponentially which supports our wildlife, and it has had a devastating impact on many of our wildlife species. The adorable hedgehog for example, has depleted over 70% and the beautiful dormouse over 90% All new builds should have wildlife friendly fencing but preferably mixed hedgerows. I would truly like to see mixed hedgerows incorporated into new builds because they help to sustain habitat for wildlife, provide shelter and a food source. Hedgerows also prevent soil erosion and so assist with environmental issues we are currently experiencing.

It is imperative that native woodland trees are planted. Quick growing conifers have a shallow root system and do not mitigate the environmental impact we currently face. If we are serious about climate change then we have to ensure Trees and Hedgerows are used because they are fundamental to assisting with climate change. We also have to think about our wildlife too. All developments should set aside land for the planting of mixed hedgerows and trees. This will have a dual effect; assist with climate change and aid our wildlife.

Below is a short list of trees that offer sustenance for birds, bees, butterflies and small mammals and all assist with climate change.

1. Silver birch.
They offer wonderful habitats for Insects, tits and woodpeckers. Light is able to reach the ground through the canopy.

2. Hawthorn.
This provides food for 100s of insect species and provides excellent habitat for birds. Dormice like to eat the May flowers, which also provides nectar for bees. Thrushes, finches, starlings and small mammals eat the haws in autumn.

3. Crab apple
The blossoms on crab apples attract pollinators in abundance. The fruit provides food for birds and small mammals too.

4. Rowan
Rowan berries again are winners with birds, especially blackbirds. It is a nice airy tree that allows plenty of light through to the ground.

5. Hazel
This tree holds up to 106 insect species and 68 species of moth and butterfly. The nuts are eaten by Dormice, woodpeckers and jays.

6. Cotoneaster Cornubia
These trees are semi evergreen and provide shelter and food for birds during the winter months.

7. Holly
Again, this is great for insects and butterflies. This tree offers shelter and food for birds and also protection from predators.

Additional trees and hedgerows are as follows: Oak, Alder, Willow, Ash, Aspen, Elm, Maple, Spindle, Yew, Rowan and Hornbeam, as well as the mixed hedgerows like Hawthorn, Dog rose, Field Maple, Bird Cherry and Blackthorn would be perfect.

Please note page 24/27 GREEN INFRASTRUCTURE AND BIODIVERSITY

It reads good on paper, but does this translate into action, in fact far from protecting these areas, your recent developments have impacted negatively on the very places you profess to protect. The developments I am referring to are Spring Mill development and Albert Bridge Mill. As you mentioned on page 24, we have a nature reserve, Healey Dell. No thought has gone into preserving it at all. We have major issues already when it comes to protecting Healey Dell from littering, fly tipping and anti-social behaviour. When you witness first hand deer foraging amongst broken glass, fly tipped items, plastic etc., it is absolutely soul destroying. The new developments around the nature reserve will add another 230 plus family homes. I cannot imagine the impact this will have on the nature reserve and the wildlife who live, shelter and forage there. Healey Dell is now completely encompassed in family homes leaving the wildlife nowhere to go but the small strip of land that is Healey Dell.

At Station Road slingco, where developers are currently demolishing the factory to make room for even more dwellings, R.B.C. gave the builders permission to decimate an area of shrubs, that included blackberry and raspberry bushes. This was done so the developers could use it for storing materials. In doing so, these contractors destroyed nesting birds, including fledgling Robins and many other small mammals. They destroyed everything, the habitat, the fledglings and all the small mammals living in the area. They have also completely blocked off access to the riverside walk too. None of this is recoverable. This is a total disregard for wildlife, for their habitat and their food sources. Planning had no idea that R.B.C. had given permission for an act of what is a WILDLIFE CRIME. Incidentally, this land cannot be put back to its original state. It has been lost forever. It was not part of their planning application and permission should never have been granted.

We have had trees cut down with nesting birds recently in Whitworth by R.B.C., are we not supposed to be protecting our trees and the life they contain? Once again, we lost nesting birds and fledglings at Jubilee Gardens and Green Brook House in Whitworth. This may seem insignificant because it was just a couple of trees at both locations, however we have to think about the impact this has on our environment and wildlife whose struggle for survival is already challenging.

Different departments at R.B.C. really do need to communicate and it is imperative that before permission is given to remove any area of grasses, shrubs and trees that the said

area is inspected by an environmental officer and local people consulted. These particular acts have caused a great deal of outrage by local residents.

You state that the Local Plan aims to protect and enhance the Borough's landscapes and you will build with wildlife in mind, but we do not see that at all. You also state the enhancement of green infrastructure is also one of the strategic priorities of the Plan and so buildings must consider wildlife and biodiversity and yet that has not been translated into action as mentioned above.

Looking at the diagram on page 26, figure 12, it appears that there should be no more building on green infrastructure. The vast majority of the area has been developed already!

I believe it is important to reforest areas as much as possible with native trees listed above. We all know the importance of preserving our woodlands, hedgerows and grass lands to not only combat **climate change and assist with clean air generation, but we need it to support wildlife that is struggling for habitat, shelter and food. We have to work with nature, not against it for our benefit and subsequent generations that follow.**

Trees, hedgerows, countryside and green spaces and their preservation are inextricably linked when it comes to combating climate change and clean air generation. We need to build up to preserve as much land as possible and ensure that every positive environmental application has been factored into new builds if we are to combat climate change to save our fragile planet.

Thank you

Kindest regards

Cllr Kim Olaolu

From: Geoffrey Rigby [redacted]
Sent: 16 August 2022 12:50
To: forwardplanning@rossendale.gov.uk; Michael Atherton <MichaelAtherton@rossendalebc.gov.uk>
Cc: [redacted]
Subject: Emerging SPD - Consultation ENV7 Wind Turbines

Dear Sir

Subject: Emerging SPD - Consultation ENV7 Wind Turbines

We are writing to reiterate comments already made by others on the emerging SPD and, in particular, the policy comments on Wind Turbines. We live in Turn Village and are members of Turn Village Residents Association (TVRA). TVRA was reconstituted following the lack of meaningful consultation before RBC approved the SMWFEL expansion application. We would appreciate, as one of the potentially most affected villages by any further turbines on Scout Moor, involvement in the planning process going forward.

We reiterate the three main points raised:

1. Upland Moorlands and the existing Scout Moor Wind Farm

The destruction of the developed areas of Scout and Rooley Moors is well documented. The effect on wildlife, the destruction and permanent loss of vast areas of valuable carbon capturing peatlands and the destruction of areas of the moorlands by illegal traffic accessing the uplands via the wind farm network infrastructure is irreversible. There are no acceptable decommissioning terms that will ever restore the moorlands to predevelopment condition. It is unthinkable that the existing development would be accepted today but we must learn from the mistakes of the past and ensure that there is no extension to the existing wind farm as was proposed by SMWFEL and Coronation Power Ltd

This submission does not specifically address the findings that the Net Zero policy comes at a significant cost to families - over £2000 per annum, nor does it address the point that the contribution by any extension of the wind farm is so completely insignificant as to be universally useless but they are important points. It is easy to be swayed by the evidence promoted by the media about global warming but Rossendale must be careful about the extent of its potential contribution to what is a worldwide problem. The planning balance must be considered extremely carefully here because there is much to consider.

Everyone has been affected by Covid. One of the positives to emerge from the crisis has been the availability and accessibility of our open spaces where it is still possible to find solitude, peace of mind and (without wishing to be too poetic) to listen to the skylarks in Spring and the curlews and other moorland birds that we are lucky enough to provide a home for. Living on the Pennine Bridleway, it has become very noticeable that there has been a very significant increase in the numbers of equestrians, walkers, runners, mountain bikers and other bridleway users who have discovered that Rossendale and Rochdale have responsibility for protecting this wonderful, accessible asset. It is not overstating the point by saying that this amenity Common Land has been the saviour of many souls over these past two or three years.

2. Peatland and Carbon Capture

The Council's current policy is to refuse any development on areas of deep peat and we fully support that policy. We are not aware that Rossendale have undertaken any specific peat mapping exercise but, turning to the documents submitted by SMWFEL in support of their application to extend the existing 26 turbine windfarm, it is clear from the peat mapping exercise undertaken on the Applicant's behalf by Penny Anderson that any expansion of the existing wind farm would be extremely damaging.

We do not pretend to be experts on the subject of carbon capture but are swayed by all the anecdotal evidence and the information available all of which emphasises that peat is an important environmental asset which must remain undisturbed. Once damaged, areas of deep peat will never be restored, ever. Rossendale was culpable in its acceptance of the extension application by SMWFEL . Rossendale could see no further than the financial advantages of development and, fortunately, the application was refused by the Secretary of State. This mistake must not be repeated. In our opinion, Rossendale is in a somewhat privileged position as an effective guardian of our areas of peatland (deep or otherwise) and we urge officers to afford this privilege some serious thought. Peatlands are rare, fragile and valuable and we would respectfully suggest going further than resisting all aggressive development in our upland peat areas. Rossendale should engage with other partners to develop a programme to permanently protect our moorlands to ensure that they remain as they are for future generations. We are aware of such initiatives as will be Rossendale

3. The Conclusions of the Secretary of State and The Planning Inspectorate regarding SMWFEL

The final recommendations by the Planning Inspectorate (following the public inquiry in 2006) and the decision by the Secretary of State together with the huge volume of information provided by an overwhelming number of objectors are all on public record so are not repeated here. All that needs to be said is that nothing has changed. All of the reasons why the expansion application was refused are still there today but with the added knowledge that there is indeed a significant cost to the taxpayer and that the contribution of onshore wind energy is not as significant as was thought. There is also a realisation that the damage to green belt, or moorland, or Common Land is very significant, very permanent and inadequately addressed by planning requirements. It is not lost on local communities that Rossendale went against the wishes of its residents, its elected Member of Parliament, The Secretary of State and The Planning Inspectorate and its neighbouring Borough Rochdale MBC when it approved the SMWFEL expansion application. This must not happen again.

We would be very grateful if you will acknowledge receipt of this consultation proposal and ensure that its contents are clearly visible on the Planning Portal

Thank you.

Regards

Bev and Geoff Rigby
[redacted]

[redacted]
[redacted]

Tel No: [redacted]

Re Climate Change Supplementary Planning Document
SPD – Consultation Process – ending 24th August 2022

Response from Anne McKown,
[redacted]
18/8/2022

Dear Forward Planning Team,

I wish to make some additional comments on how the "Climate Change Supplementary Planning Document "referred to as the "SPD "in this submission relates to ENV7: Wind Turbines in the Local Plan, adopted in December 2021.

1 There seems to be an assumption in the SPD that by building more wind turbines on their own in the Rossendale Borough this will bring about some "Reduction of greenhouse gases and thus slow down climate change (page 4 of SPD)".

Indeed, the picture on the front page of the document seems to almost equate wind turbines with the response to climate change.

I think it important that this assumption is unpacked and looked at in detail.

Firstly, just to be clear – electricity generated by wind turbines is intermittent, that is it only happens when the wind blows rather like solar generated electricity, which only happens when the sun shines.

So, if you want to provide electricity from these sources when it is needed 24/7, another source of that electricity will also be needed, the so called "backup "generation.

The SPD does acknowledge this,

Page 16 “Low carbon district heat networks states that battery storage ..is used to overcome fluctuations in the generation of electricity from wind and solar energy”

So presumably as the Council is committed to
“Obtaining our energy needs from renewable sources “page 2 SPD,

Are large battery networks planned?

If they are not planned what is the plan for the backup generation required to ensure a 24/7 electricity supply and prevent power cuts? Would that be fossil fuel or gas generated electricity?

The point being that simply building more wind turbines to generate electricity without the backup generation to deal with its intermittency, effectively means even more reliance on other sources of electricity probably from fossil fuels or gas.

Furthermore, these sources currently carry an increasing monetary cost and more greenhouse gases generation.

Or will the backup come from the use of large-scale battery deployment and at what cost and does the technology for this level of battery storage exist now?

Thus, building more wind turbines on their own, will not achieve either of the Council’s aims outlined on page 4 of the SPD i.e.
“The reduction of greenhouse gases and thus slow down climate change “

2 . The SPD shows a large area in the Borough suitable for Commercial Wind Turbines page 5.

Before embarking on building more commercial wind turbines in Rossendale it is legitimate to ask the question if the UK currently can

make use of all the existing commercial wind turbines it has and so urgently needs more?
The surprising answer to that question appears to be NO,
as I will outline below.

Mainly because the electricity grid infrastructure needs to improve to be able to move some of the wind generated electricity from where it is generated to where it is needed.
Currently without that improvement in the infrastructure it has become accepted practice that some turbines in some areas of the UK are turned off from the grid when it does not have the capacity to handle their generation and furthermore paid to be turned off.
These payments are termed “constraint payments “.
The cost of these payments amounts to millions of pounds per year of discarded and wasted electricity generation.

So maybe the priority for climate change right now is to improve our grid infrastructure first and not to simply build more generating capacity when we cannot fully utilise what we already have.

3 The future financial risks to the Borough – decommissioning wind turbines.

Wind turbines are designed to last around 20 years dependent upon the conditions in which they are operating. At the end of that lifetime, they can be replaced by newer, often larger models
i.e. – “repowering “for another 20 years or so with ongoing income for the operator.

Or they can be removed, and the environment restored as far as is possible to its previous condition i.e., decommissioned. This is an expensive process of construction in reverse which is purely a cost to the operator with no financial reward.

For commercial wind turbine operators, the option favoured would be guided by the Government incentives / subsidy scheme at the time, which currently favours repowering, but this could change in the future.
Developers of wind farms often sell on their wind farm and the commercial operators of wind farms are not required to keep back monies in their company to fund this decommissioning process.

So, if it is not financially viable at the time to repower old turbines and the operating company has no funds, it leads to the possibility of those old turbines simply being abandoned where they are.

The costs of that decommissioning ultimately being borne by the landowner or possibly the local Council – in this case Rossendale.

Given this scenario it would seem prudent to ensure that before planning permission is granted for such developments robust financial arrangements are set in place to protect the financial interests of residents.

ENV7 page 124 in the adopted Local Plan concerning decommissioning states that

“The Council …. will consider financial guarantees through a section 106 agreement “

I would question whether this “consideration “of a financial guarantee through a section 106 agreement is sufficient to address this very important and potentially hefty financial risk that residents might have to bear.

Might an Escrow Account or a decommissioning bond be a more appropriate mechanism?

I will not reiterate my other previous comments regarding the Local Plan which are unchanged and remain relevant here.

Anne McKown

Here's one way to stop this drought

Tony Juniper

Fresh water is the lifeblood of civilisation. It makes life on land possible. But we have lost touch with how the water cycle works. As Britain runs further into serious drought, people are asking if we are prepared and if we should have planned better, by building more reservoirs or plugging leaks in the water distribution system.

These are hugely important subjects. What is not being discussed are the severe floods that may well arrive in a few months' time. Climate change is leading to greater volatility in the water cycle. It's time to stand back and examine our resilience to water extremes and start improving water quality. One standout conclusion for me is that we need to have much more water in our environment. During the last 100 years, the UK has lost 90% of its wetlands. This has led to the drastic decline of wildlife and rendered the country more vulnerable to the effects of extreme conditions. Draining fens, desiccating peat bogs, drying floodplains and the claiming of coastal marshes has transformed how our land looks and works. Restoring some wetlands could deliver huge benefits.

Wetlands can help to keep rivers flowing, even when rain is scarce, thereby protecting the living, shimmering threads that bring life to the landscape. Water standing on the land also helps recharge the aquifers that underpin our public water supply. Holding more water in the environment through the restoration of wet ecosystems can reduce flood peaks and protect us from the misery of the flooding that periodically affects communities across the country.

During a recent visit to Norfolk, I saw a newly created beaver pond. The animals had been released by the farmer into a large wooded pen on the site of an old wartime base. A tiny stream had been impounded by the animals to create a quite substantial body of water topped up with winter rain. Since the rain stopped earlier this year, that pond has been sustaining a headwater stream of the Glaven, one of England's precious chalk rivers. The new beaver pond has helped that wonderful watercourse remain in better shape than it would otherwise have been. When it does rain again, that stream will flow more evenly than if there were no beavers, therefore reducing the risk of floods.

Beaver ponds and wetlands are also excellent at catching carbon and other pollutants such as agricultural fertilisers, so they can help meet water-quality targets. That beaver pond was also a reminder of how wetlands can bring vibrant life back into otherwise degraded landscapes. Frogspawn, fish, birds and wetland plants had all found a home there.

Wetter conditions also diminish the risk and effect of major fires. For decades, many of our upland blanket bogs have been subject to drainage, rendering them more susceptible to fire. Making these bogs wetter can not only reduce that peril but also improve water quality, increase wildlife and reduce downstream flooding.

At Natural England, we are pleased to see lots of plans afoot to make more of wetlands. The new Environmental Land Management schemes that are replacing the EU's common agricultural policy are a major opportunity. The new tool of biodiversity net gain, which will require developers to replace and increase habitat lost to housing and infrastructure, will add to the mix. So, too, will plans to create new wetlands to soak up nutrients from new housing developments. There is a national programme to improve peatlands and also a partnership with businesses, vigorously led by the Wildfowl and Wetlands Trust, to create 100,000 hectares (247,000 acres) of new wetlands.

There are also opportunities for water companies in the development of nature-based solutions, which harness habitat creation as a natural partner and complement to hard infrastructure. There could also be huge benefits in the careful design of engineering infrastructure such as reservoirs.

One example is the Abberton reservoir in Essex, which is not only a major strategic water supply asset, but an internationally important habitat for many bird and amphibian species.

A more natural water cycle should be a strategic national priority. Winston Churchill famously once said that we should "never let a good crisis go to waste". The current drought, and the floods that are likely to arrive later in the year, should be an opportunity to find a new way of looking at water.

* **Tony Juniper** *is the chair of Natural England*

FRIDAY 22ND AUGUST 2022

GUARDIAN

ROSSENDALE BC - Supplementary Planning Documents (SPD).- CLIMATE CHANGE

Emerging Supplementary Planning Documents

Ref. ROSSENDALE-170822-Climate Change-FAL-SUBMISSION-DRAFT-2

Date - 18TH August 2022

FAO - forwardplanning@rossendalebc.gov.uk.

I am writing in response to Rossendale's invitation to comment on the emerging SPD and, in particular, the policy comments on Wind Turbines.

Policy ENV7 in the Local Plan states, "***New larger turbines or re-powering of existing ones may be considered on the "High Moorland Plateau Areas Suitable for Wind Turbines" shown on the Policies Map, provided areas of deep peat (over 40cm depth) and blanket bog are avoided. Development of new wind turbines over 25 metres in height or re-powering of existing machines outside these areas would be resisted. All areas of the Borough are considered to be potentially suitable for single turbines of up to 25m in height.***"

In the Emerging Supplementary Planning Document on the section ENV7 seems to propose

- ***All areas of the Borough are potentially suitable for single turbines of up to 25m.***
- ***Enclosed uplands areas suitable for wind turbines – potentially for single and small groups of turbines, up to 59m in height***
- ***High moorland plateau areas suitable for wind turbines – for new larger turbines or re-powering of existing, so long as areas of deep and blanket bog are avoided.***

Things that come to mind are decommissioning bonds (although re-powering is now on the agenda), protection of historic landscape, total carbon offset to include turbine manufacture."

I feel this whole venture to be misguided. In fact it could be seen as running directly across a true policy to mitigate both Climate Change and produce Renewable Energy in any significant material way. To me, the Council seems to be encouraging development for its own financial benefit, and that of the developer, and completely disregarding safeguarding a fantastic carbon capture eco system, the upland peat , a public resource , as well as destroying a heritage area , treasured for its beauty and value for wellbeing exercise, both walkers and equine.

*Selling its assets for **a handful of silver,** to the loss of generations of the Rossendale Valley , and the broader population to come.*

I have six main points to raise to object to this proposed policy :-

1. **CASE LAW PRECEDENT**
2. **PEAT FIELD PROTECTION**
3. **HERITAGE PROTECTION**
4. **PROPORTIONALITY**
5. **EFFICIENCY OF TURBINES**
6. **COMMUNITY RESISTANCE**

No 1 - CASE LAW PRECEDENT

The Scout Moor Public Inquiry closed with the Inspector rejecting further development of a wind farm. Nothing has changed materially to justify this legal status be cancelled.

So why is RBC seemingly encouraging flouting of this edict ? In my view legally any such venture is *dead in the water* before it were to go for planning application. And certainly should not be approved with a single case officer's discretionary powers

No 2 - PEAT FIELD PROTECTION

All peat deposits and field on the uplands are of huge benefit as an eco storage facility and should never be disturbed. The discrimination between deep/blanket bog is unnecessary and spurious. The Classification anyway derives entirely from another Soil Survey programme, and is inappropriate for the Carbon Storage issue.

Areas of Peat should never be disturbed, particularly at this point of high need. If left they will develop and their value will increase. Abuse and destruction will be counter productive to the spirit of protection of the planet.

Any claims of regeneration or repair should be challenged by independent expert witnesses, and statements by developers regarded with suspicion, as their loyalties may be skewed towards their clients satisfaction. Regeneration or repair, in my view, and with my knowledge to bear, seems impossible to reverse if any damage has been actioned.

The need for Peat Protection is now recognized UK wide. A recent Guardian article written by the Chair of Natural England, Tom Juniper is attached to this submission. Furthr links to current programmes are :-

https://www.nature.scot/climate-change/nature-based-solutions/peatland-action-project

https://www.nature.scot/doc/scotlands-national-peatland-plan-working-our-future

https://www.wwt.org.uk/discover-wetlands/wetlands/peat-bogs/

No.3 - HERITAGE PROTECTION

I specifically raised, at the Local Plan consultation, the value of the moorlands at a level that Rossendale should be starting a programme of true recognition of this public asset – going for a classification of Area of Outstanding Natural Beauty and perhaps SSSI. These areas, on

stone Millstone Grit, are special in their flora and fauna and wildlife generally. For instance the film presentation, at the Whitaker Gallery in Rawtenstall itself, beautifully demonstrates the spectacular beauty. Folks are already having reservations of '*going up top'* as they find the industial turbines unsettling. To cover the rest of this wonderful area with turbines would be gross incompetence.Well being, peace and tranquillity, exercise are all now understood. Turbines are, by their nature, unnatural and alien and produce exactly the reverse of such healthy therapy – free to all.

Check out

https://www.moorsforthefuture.org.uk/

Mission is –" **PROTECTING THE UPLANDS FOR THE BENEFIT OF US ALL"**

No 4 - PROPORTIONALITY

At the Scout Moor Public Inquiry, objectors used the slogan - '**Enough is Enough'**. Why should this area be blighted with even more turbines ? We have done our bit, and it is time other parts of the country did their bit.

No. 6 - EFFICIENCY OF TURBINES

Technology of turbines has now moved on, and on-shore turbines are massively less efficient than off shore Wind Farms. So why lay a path to such for Rossendale?

Further, the wind power, at this level, is proven to be often TOO HIGH, such that turbines have to be turned off, which may attract a payback to the owner from the Grid company (as is contracted for Scout Moor Field), a hidden cost to the tax payer. Or turbines may be damaged or completely destroyed – as was the Reaps Moss group of 3 turbines.

COMMUNITY RESISTANCE

Community objection across the Valley was a huge factor in the failure to develop previously. . To disregard this factor risks another financial disastrous Public Inquiry.

Submitted Wednesday August 2022 by Dr. Falmai Binns, a member of FRIENDS OF THE Moorland for Rossendale, Rochdale and Bury FMRRB

.....

Dr. Falmai Binns

.....

The Coal Authority

Rossendale Borough Council - Climate Change Supplementary Planning Document

Contact Details
Planning and Development Team
The Coal Authority
[redacted]

Planning Email: [redacted]
Planning Enquiries: [redacted]

Date
23rd August 2022

Dear Sir/Madam

Climate Change Supplementary Planning Document

Thank you for your notification which we received on the 13th July 2022 in respect of the above consultation.

The Coal Authority is a non-departmental public body sponsored by the Department of Business, Energy & Industrial Strategy. As a statutory consultee, The Coal Authority has a duty to respond to planning applications and development plans in order to protect the public and the environment in mining areas.

Our records indicate that within the Rossendale area there are recorded coal mining features present at surface and shallow depth including; mine entries, shallow coal workings and reported surface hazards. These features may pose a potential risk to surface stability and public safety.

The Coal Authority's records also indicate that surface coal resource is present in the area, although this should not be taken to imply that mineral extraction would be economically viable, technically feasible or environmentally acceptable. As you will be aware those authorities with responsibility for minerals planning and safeguarding will have identified where they consider minerals of national importance are present in your area and related policy considerations. As part of the planning application process consideration should be given to such advice in respect of the indicated surface coal resource.

It is noted that this current consultation relates to a Climate Change SPD and I can confirm that the Planning team at the Coal Authority have no specific comments to make on this document.

Yours faithfully

[redacted]

Melanie Lindsley *BA (Hons), DipEH, DipURP, MA, PGCertUD, PGCertSP, MRTPI*
Development Team Leader (Planning)

Response to ENV7 consultation, by Dr. Alan Heyworth, 21/8/2022

PEAT

It is clear that the installation of the existing wind turbines has caused considerable damage to the peat cover on the moorland. It is equally obvious that more turbines will mean more damage. More turbines will mean more access for heavy plant and machinery, more roads and tracks, more concrete, more large excavations and more digging and storage of peat for later 'restoration' (an ineffective process).

The moor has not always had a peat cover. Until about 5,000 years ago it was a birch woodland and scrub, and the remains of this can still be seen in many places, beneath the peat, resting on bedrock.

At around 5,000 years ago there was a sudden and marked deterioration in the climate which became colder and wetter, conditions became too wet, boggy and acid for birch, which was replaced by mosses and sedges (plants that started the peat-forming process). Very little of the carbon stored within the undisturbed peat for the last 5000 years has been released into the atmosphere. The loss of carbon, in the form of CO2 from the peat, is now happening because of disturbance and erosion in the last few decades. Much of this erosion and the loss of the peat cover at the time seemed only minor events e.g. in 1959, a hot , dry summer caused some boggy areas to dry out. Serious fires occurred and these burned down into the dry peat. The ash from these fires was washed down into the streams and reservoirs. The peat-forming vegetation lost at that time has not recovered.

The peat most at risk is probably that eroded back so as to form vertical cliffs of peat, which is cut back over the whole face. This loosened peat is then spread as a thin cover in front of the cliff, but wil not support peat-forming vegetation. It will remain as bare, barren peat which cannot regenerate .

Elsewhere on the moor erosion was made worse by over-grazing. In a trial the sheep were fenced off from a section of the peat. However the result was not more peat-forming vegetation but the growth of shrubs. It is possible that the climate now (and in the future) is more similar to that of pre-5,000 years ago and that the natural vegetation would now revert to woodland.

Peat thickness: more or less than 40cm

These figures appear to be carried over from the Soil Survey definitions of peat, peaty soil and peaty top soil and their soil maps. They have no particular scientific basis. The extent of peat cover on the moors is important in controlling runoff particularly as it affects flooding and catchment. It is mainly the area of peat rather than the depth which is important. If carbon sequestration is considered then thickness of peat is less important than the area. Actively-growing thin peat will take up as much CO2 as the same area of thick peat, often more. It is of course important not to disturb thick peats, since they would release large amounts of CO2 as they broke down. On the moors there are considerable areas which previously had a continuous peat cover but now, due to disturbance of various kinds it has been lost, or

more or less dissected. The policy should be to avoid areas of deep peat, thin peat, and areas which have or could have peat-forming vegetation. The blanket peat has the potential to store carbon for more than 5,000 years as shown by birch tree remains.

What does "avoiding areas of blanket bog and deep peat" mean:- avoiding by a few inches, or a field away? It should say "avoiding any activity likely to damage peat or to inhibit the expansion of peat cover", because peat has been eroded and stripped from areas which have always (more than 5,000 years) had peat cover. If new carbon sequestration is the main aim then every effort should be made to increase the area of actively-growing peat.

In any event we cannot predict what the nature of the climate will be. Perhaps the moorland peat is only a relatively brief result of an event 5,000 years ago: but, still, it is clearly advisable at the present time to ensure that it is not thoughtlessly destroyed

MISCELLANEOUS POINTS

All this windfarm activity has little point as the total CO2 saved is immeasurably minute in the world wide total. The only justification is to encourage others - but will it? The actual motive is profit - actually greed. The proposers are not concerned about spoiling the moor for others; neither, apparently is the Council. People will never again be able to enjoy the remoteness, silence and peace of the moors and neither will they be able to view the whole, unspoiled and sweeping panorama. I first went up "ont'Tops" as a seven year old, and I was immediately amazed that such a place exisited, only a mile or so from our front door. This is what makes Rossendale virtually unique. The moors were so close to the mills and the practice of walking on the moors by the popuation became a popular pursuit. Because of the terraced geology this walk was from a narrow confined and smoky valley and suddenly out on to a vast open plateau with no sign of habitation, where the loudest sounds were the skylark and curlew. It was a different world.

This has now been destroyed. It can probably still be rescued. The existing turbines must not be replaced. They were an expensive mistake. If more turbines are allowed more and more will follow and the moors will become a giant scrapyard

N.B. these turbines are largely constructed from glass-reinforced plastic (GRP) which is difficult to recycle and has no scrap value. Trials are in progress of an expensive pyrolysys method to 'burn' the defunct turbines as a way of 'recycling' them. The cost of all this must be included when considering the environmental effectiveness of turbines. If a bond for each turbine is not properly enforced then the moors could be littered with abandoned turbines.

Why is the Rossendale moorland treated differently from similar areas (AONB etc)? Is there some feature of the local geology, topography, stratigraphy, vegetation, etc, which distinguishes it from very similar landscapes? It is understandable that there were these differences when all the mills, quarries and mines etc were working, but now this is no longer the case and our moorland should be considered a valuable nature reserve. The Council should be making sure that the moorland is preserved for future generations to enjoy. It seems that the Council are alarmed at the prospect of the moors

reverting to nature. Perhaps they are influenced by the payments (the Council is selling something it does not own).

Who wrote this policy ENV7? The only actual motive for this can be the Council's eyes on some much needed income. This is very much a case of "selling their birthright for a mess of potage". It is worse for those who remember it well. Now I get no pleasure walking the moors anywhere the turbines can be seen or heard.

We can already see the beginnings of the argument: as there are already existing turbines a few more won't make any difference. The scientific case for protecting the moorland peat is strong and a 'few more turbines' will make a huge difference : once the peat is disturbed 5,000 years of steady, beneficial growth will be lost, possibly forever.

AH 21/08/2022

.

Good morning

I have reviewed the SPD and have the following comments to make which I hope you will take into consideration:

Section 3: Reducing the dominance of fossil-fuelled vehicles via encouraging sustainable and more active transport

Welcome the intention but suggest strengthening the objective to include 'Active Travel' which includes walking, cycling and running. Reference to the government agency 'Active Travel England' would also be helpful in this section. This is the government's executive agency responsible for improving the standards of cycling and walking infrastructure in England. It is sponsored by the Department for Transport: https://www.activetravel.org.uk/about/

Active Travel and creating an Active Environment helps to implement one of the five Big Issues in Sport England's 'Uniting the Movement' Strategy 2021. Sport England would welcome reference to this national strategy within the SPD:
https://www.sportengland.org/about-us/uniting-movement

The reference to the TCPA's 20-minute neighbourhood but alongside this reference to Sport England's 'Active Design' guidance would also be helpful as this sets out 10 principles to achieve an Active Environment with co-location of community facilities and infrastructure being one of those principles:
https://www.sportengland.org/guidance-and-support/facilities-and-planning/design-and-cost-guidance/active-design

Section 6: Biodiversity and Green Infrastructure

Sport England welcomes the inclusion of Green Infrastructure as a means to help mitigate climate change. Playing fields are a typology of Green Infrastructure and where any proposals to increase cycling/walking links or create biodiversity areas as part of a wider playing field, these proposals should be discussed with Sport England as statutory consultee on developments that affect playing fields. Sport England actively promote initiatives to mitigate climate change, and that is embodies in our 'Uniting the Movement' Strategy but any proposals need to ensure there is no loss of functional playing field and no impact on pitch provision. The Council's Playing Pitch and Outdoor Sport Strategy (2021) can help inform appropriate climate change mitigation proposals where playing fields are included within those schemes.

If you have any queries or would like to discuss the comments further please contact

Kind Regards

Fiona Pudge **BA(Hons) BTP MRTPI**
Planning Manager – North West

United Utilities Water Limited
[redacted]
unitedutilities.com
[redacted]

By email only: forwardplanning@rossendalebc.gov.uk

Forward Planning Team
Rossendale Borough Council
Business Centre
Futures Park
Bacup
OL13 OBB

Your ref:
Our ref:
Date: 24-AUG-22

Dear Sir / Madam

ROSSENDALE BOROUGH COUNCIL – CLIMATE CHANGE SPD – CONSULTATION DRAFT

Thank you for your consultation seeking the views of United Utilities as part of the Supplementary Planning Document (SPD) process for Rossendale. United Utilities wishes to build a strong partnership with all local planning authorities (LPAs) to aid sustainable development and growth within its area of operation. We aim to proactively identify future development needs and share our information. This helps:

- ensure a strong connection between development and infrastructure planning;
- deliver sound planning strategies; and
- inform our future infrastructure investment submissions for determination by our regulator.

United Utilities welcomes the Climate Change SPD, which reflects the Council's commitment to climate change and how Rossendale can best adapt to climate change including focus on water interventions.

We encourage you to direct future developers to our **free pre-application service** to discuss their schemes and highlight any potential issues by contacting:

[redacted]

[redacted]

General Comments

Our Assets

It is important to outline to the LPA the need for our assets to be fully considered in development proposals. We will not normally permit development over or in close proximity to our assets. All United Utilities' assets will need to be afforded due regard in the masterplanning process for a site. This should include careful consideration of landscaping proposals in the vicinity of our assets and any changes in levels.

We strongly recommend that the LPA advises future applicants of the importance of fully understanding site constraints as soon as possible, ideally before any land transaction is negotiated, so that the implications of our assets on development can be fully understood. Where our assets exist on a site, we ask site promoters to contact United Utilities to understand any implications using the above contact details.

Plans of our assets are available from a range of providers including our Property Searches team who can be contacted at https://www.unitedutilities.com/property-searches/.

Our Response

United Utilities welcomes this SPD providing guidance to support the Council's Local Plan policies relating to climate change and supports the Council's commitment to reach a carbon-zero position by 2030.

Energy Efficiency and Renewables

United Utilities wishes to note that parts of Rossendale are used as public water supply catchment land. Development proposals on water catchment land can have an impact on water supply resources and therefore we recommend that the guidance sets out the need to engage with the statutory undertaker for water to determine whether any proposal is on land used for public water supply catchment purposes.

In cases of wind energy proposals on water catchment land, the applicant should seek to locate development so that the impact on public water supply is minimised through the location of the development and through the undertaking of appropriate risk assessments and inclusion of mitigation measures in the design and construction process. It is particularly important to avoid the location of new wind turbines on deep peat land. We recommend you include the following wording relating to water catchment land.

Development proposals on land used for public water supply catchment purposes will be required to consult with the relevant water undertaker. The first preference will be for proposals to be located away from land used for public water supply purposes. Where proposals are located on catchment land used for public water supply, careful consideration should be given to the location of the proposed development and a risk assessment of the impact on public water supply may be required with the identification and implementation of any required mitigation measures.

Water interventions

We welcome the commitment of the Council to work with stakeholders to address issues of flood risk from all sources to reduce flood risk overall and better manage the continuing effects of Climate Change through sustainable drainage within future development applications.

When considering flood risk and the location of development, we believe it is important to highlight that the document should give sufficient emphasis to all forms of flood risk. We request that this section of the SPD includes reference to the definition of flood risk as set out in the National Planning Practice Guidance which states (underlined sections identify our emphasis):

What is "flood risk"?

For the purposes of applying the National Planning Policy Framework, "flood risk" is a combination of the probability and the potential consequences of flooding from all sources – including from rivers and the sea, directly from rainfall on the ground surface and rising groundwater, overwhelmed sewers and drainage systems, and from reservoirs, canals and lakes and other artificial sources.

Paragraph: 002 Reference ID: 7-002-20140306

This section should be clear that the SPD will apply to the risk of flooding from 'overwhelmed sewers' and from 'reservoirs'.

We note the following wording:

'Where site-specific flood risk assessments are required, developers should consider future sources of flooding, alongside the potential increase of flooding expected as a result of climate change'.

We note the reference for developers to *consider future sources of flooding*. We request that further details of sources are provided, in particular we request that the risk of flooding from sewers is included to state that applicants should consult with the sewerage undertaker to confirm the nature and extent of any flood risk and potential future flood risk from public sewers. This should include consulting with the sewerage undertaker to understand:

a) if there are any sewerage surcharge levels at the point of connection that could influence site design;
b) whether there is an incident of sewer flooding at or in the vicinity of the proposed development site; and
c) if sewer modelling data indicates that existing sewers that pass through or near to the site present a modelled risk of sewer flooding to the proposed development site.

We also request that the above paragraph references reservoir flood risk.

Surface Water Flooding

We request that the SPD is clear that areas at risk of surface water flooding should not be displaced by new development. In particular, it should not be directed towards existing properties or the highway which will connect with the highway drainage system. This in turn will often indirectly connect with the public sewerage system and increase flood risk.

The Drainage Hierarchy

We note the following wording *'SuDS are designed to both manage the flood and pollution risks resulting from urban runoff, reducing pressure on the sewerage network, and to contribute wherever possible to environmental enhancement and place making'*.

As outlined in the 'Building for a Healthy Life', we request the SPD to include reference to the 'four pillars' of sustainable drainage systems i.e., water quantity, water quality, amenity and biodiversity.

We also request that the application of the surface water hierarchy should not be confused with wider application of a preference for sustainable drainage features which are multi-functional. The surface water hierarchy should make clear that water re-use is the first priority. We request the following wording to be added:

'Surface water should be discharged in the following order of priority:

1. *Re-use on site.*
2. *An adequate soakaway or some other form of infiltration system.*
3. *An attenuated discharge to a surface water body.*
4. *An attenuated discharge to public surface water sewer, highway drain or another drainage system.*
5. *An attenuated discharge to public combined sewer. Applicants wishing to discharge surface water to public sewer will need to submit clear evidence demonstrating why alternative options are not available.'*

We would also recommend that the SPD expands on requirements in relation to water use and reuse. We wish to recommend that the SPD includes guidance for new development to be built to the optional water efficiency standard prescribed in Building Regulations. A tighter water efficiency standard in new development has multiple benefits including a reduction in water and energy use, as well as helping to reduce customer bills. Building Regulations includes a requirement for all new dwellings to achieve a water efficiency standard of 125 litres of water per person per day (l/p/d). In 2015 an 'optional' requirement of 110 l/p/day for new residential development was introduced, which can be implemented through local planning policy where there is a clear need based on evidence. We have enclosed evidence prepared by Water Resources West to justify this approach. As you will see from the evidence, we believe that the optional standard can be achieved at minimal cost. We therefore recommend the SPD includes the following water efficiency wording:

New dwellings will be required to meet the higher National Housing Standard for water consumption of 110 litres per person per day.

Non-domestic buildings will be expected to achieve a BREEAM rating of 'Excellent'.

As mentioned above, surface water should be managed as close to its source as possible. There are opportunities such as rainwater recycling, green roofs and water butts and we would encourage the LPA to embrace all water efficiency measures. Modern design techniques can promote measures for water recycling to reduce the impact on infrastructure requirements.

Sustainable Drainage Systems (SUDSs)

With regards to the delivery of multi-functional SuDS, we would emphasise that multifunctional sustainable drainage will be required unless there are exceptional circumstances and would suggest the following wording for inclusion in the SPD:

'Unless a below ground infiltration system is proposed for the management of surface water, applicants will be required to incorporate sustainable drainage which is multi-functional and at the surface level in preference to conventional underground piped and tanked storage systems, unless, in exceptional cases, there are clear, justifiable and compelling reasons why this would

be inappropriate. Applicants will be expected to design sustainable drainage in accordance with the four pillars of sustainable drainage (water quantity, water quality, amenity and biodiversity). Drainage will be required to be considered early in the design process and linked to any strategy for landscaping, biodiversity and the public realm. Any approach to landscaping will be required to be evaluated early in the design process to identify opportunities for landscaping to be integrated with sustainable surface water management. It should identify SuDS opportunities such as:

- *green roofs;*
- *permeable surfacing;*
- *soakways and filter drainage;*
- *swales, including retrofitted swales;*
- *bioretention tree pits/rain gardens;*
- *basins and ponds; and*
- *reedbeds and wetlands.*

Any drainage system should be designed in accordance with 'Ciria C753 The SuDS Manual' or any subsequent replacement guidance.'

The Sewerage Network in Rossendale

It is important to explain that existing drainage systems in the district are often dominated by combined sewers. This method of sewer infrastructure is a result of the time it is was constructed, with combined sewers taking both foul and surface water. If there is a consistent approach to surface water management as part of new development, it will help to manage and reduce surface water entering the sewer network, decreasing the likelihood of flooding from sewers, the impact on residents and businesses, and the impact on the environment.

Water Quality

Policy ENV9 references water quality. We request further details are included to ensure that any development in a groundwater source protection zone or on land used for public water supply catchment purposes is considered.

The Environment Agency has defined Groundwater Source Protection Zones (SPZs) for groundwater sources, which are often used for public drinking water supply purposes. The prevention of pollution to drinking water supplies is critical. The SPZs signify where there may be a particular risk from activities on or below the land surface. Such activities include construction. The details of SPZs can be viewed on the website of the Environment Agency.

We wish to highlight that new development sites are more appropriately located away from locations which are identified as sensitive groundwater protection areas especially Groundwater Source Protection Zone 1 (SPZ1) which is closest to the water abstraction point and the most sensitive. This is of relevance given the presence of SPZs in Rossendale. With respect to groundwater we recommend you add the following wording:

'In consultation with the council and relevant statutory bodies, applicants will be required to consider the potential impacts on water quality resulting from the design, construction and operation of proposed development. Where necessary, development proposals should include measures to reduce any risk to the

water environment and aim to protect and improve water quality. Development proposals within Groundwater Source Protection Zones must accord with the latest national guidance on Groundwater Protection. New development within Groundwater Source Protection Zones will be expected to conform to the following.

i. *RISK ASSESSMENT - a quantitative and qualitative risk assessment and mitigation strategy with respect to groundwater protection will be required to manage the risk of pollution to public water supply and the water environment. The risk assessment should be based on the source-pathway-receptor methodology. It shall identify all possible contaminant sources and pathways for the life of the development and provide details of measures required to mitigate any risks to groundwater and public water supply during all phases of the development. Subject to the outcome of the risk assessment, the mitigation measures may include the highest specification design for the new foul and surface water sewerage systems (pipework, trenches, manholes, pumping stations and attenuation features).*
ii. *MASTERPLANNING – careful masterplanning is required to mitigate the risk of pollution to public water supply and the water environment. For example, open space can be located so that it is closest to the boreholes in order to minimise the potential impact on groundwater. In addition, an appropriate management regime will be required for open space features in a groundwater source protection zone.*
iii. *CONSTRUCTION MANAGEMENT PLAN - Construction Management Plans will be required to identify the potential impacts from all construction activities on both groundwater, public water supply and surface water and identify the appropriate mitigation measures necessary to protect and prevent pollution of these waters.'*

Biodiversity

United Utilities is supportive of any approach to the planting of new trees and woodland and would encourage the authority to consider this in the context of flood risk management and opportunities to 'slow the flow' reflecting our wider comments relating to flood and surface water management.

Whilst recognising the benefit of on-site delivery of BNG in many circumstances, in many instances off-site delivery may be more appropriate. For example, off-site delivery in a strategic location that has been identified through a Local Nature Recovery Strategy where there are opportunities to pool the benefits of BNG from many small development proposals.

We request that the guidance on BNG reflects the unique circumstances of infrastructure providers. We are keen to ensure that BNG is delivered in the most appropriate locations however, this should be carefully considered in the context of ensuring key infrastructure is not constrained by on-site provision of BNG, which could be to the detriment of responding to future growth and environmental needs. Key operational infrastructure is often very geographically restricted and cannot be easily moved. Therefore, off-site provision of BNG may be in the best interests of good long term planning and environmental needs to ensure that there is space around infrastructure for future expansion.

As part of our response to the Environment Act and in preparation for the future delivery of biodiversity net gain (BNG), we are currently reaching out to local authorities to ensure we develop a BNG strategy that, wherever possible, supports local biodiversity and nature recovery needs. We are currently evaluating all land owned by United Utilities within local authorities that could be used for habitat creation or enhancement works and developing a list of candidate sites. In identifying land, we recognise the strategic importance of aligning our site selection process with local, regional and national policies

and objectives on biodiversity and nature recovery. We would welcome the opportunity to further discuss your approach to the delivery of BNG and the identification of strategic opportunities to support local nature recovery. We are keen to ensure that BNG is delivered in the most appropriate locations and without restricting the potential future expansion and operation of key operational infrastructure which is often very geographically restricted and critical to meeting future growth and environmental drivers. We would specifically welcome the opportunity to further discuss your approach to biodiversity net gain.

Green Infrastructure

We support the inclusion of guidance relating to Green infrastructure and the multifunctional benefits this can have towards climate change mitigation and adaptation. Green infrastructure can help to mitigate the impacts of high temperatures, combat emissions, maintain or enhance biodiversity and reduce flood risk. Green infrastructure and landscape provision play an important role in managing water close to its source. Outlining the necessary link between green infrastructure, surface water management, landscape design and biodiversity as a strategic requirement will help to ensure that sustainable surface water management is at the forefront of the design process.

As outlined under the SuDS section above, United Utilities wishes to recommend wording which is linked to the need to evaluate opportunities for surface water management. We have enclosed some case studies which provide imagery of example SuDS components.

Landscaping

United Utilities also wishes to note the importance of any approach to planting new trees giving due consideration to the impact on utility services noting the implications that can arise as a result of planting too close to utility services. This can result in root ingress, which in turn increases the risk of drainage system failure and increases flood risk.

Sustainable surface water management will be particularly important to consider in the context of the requirement for new streets to be tree lined. It is a national policy requirement that new streets are tree lined as stated in paragraph 131 within the NPPF:

131. Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users.

We request that the tree-lining of street trees is referenced in the SPD and that this requirement is linked to the inclusion of opportunities for surface water management, for example, in the form of bio-retention tree pits and landscaping.

When considering tree lined streets, it will be important that applicants refer to our Standard Conditions for Works Adjacent to Pipelines' (a copy of which is enclosed) and consult with stakeholders when implementing the delivery of tree lined streets. We wish to note that the approach to any planting must have regard to the proximity to existing or proposed utility assets to ensure there is no impact on these assets such as root ingress. Trees should not be planted directly over water and wastewater assets or where excavation onto the asset would require removal of the tree. Deep rooted shrubs and trees should

not be planted within the canopy width (at mature height) of water and wastewater assets. Our Standard Conditions provide advice on working near our assets including advice on landscaping in the vicinity of our assets.

Summary

Moving forward, we respectfully request that the council continues to consult with United Utilities for all future planning documents. In the meantime, if you have any queries or would like to discuss this representation, please do not hesitate to contact me.

Yours faithfully

Andrew Leyssens
Planning, Landscape and Ecology
United Utilities Water Limited

Encs. *Susdrain Case Studies*
Water Resources West – Water Efficiency in New Homes
Standard Conditions for Works Adjacent to Pipelines

Buckland House Car Park, Hampshire

SuDS used

- Trees/stormwater soil cells
- Gully pots
- Attenuation tank
- Soakaway
- Gravel bed
- Permeable surfaces

1. Location

Buckland House Car Park, Lymington, Hampshire, SO41 9HG.

2. Description

The Buckland area in Lymington, Hampshire is the site of impressive natural beauty, nestled between the seaside and partly covered by trees planted since the 18th century. When the Buckland House, a property located near the city centre, came under new management in 2012, the building and its adjacent car park underwent a significant redesign that managed to have minimum impact on the historic site. An area that previously functioned as a footpath was redesigned in order to extend the car park, and this design called for the removal of large street trees from the public right of way. In light of the removal of these trees from the public realm, the New Forest District Council mandated that at least three new trees be planted on the site to replace them. But it would not be enough to simply replace these mature trees in number, as the Council best management practice for trees requires them to be planted in generous soil volumes to help them become large functional trees that will benefit the local community.

Figure 1 Buckland House Car Park (1)

Figure 2 Buckland House Car Park (2)

3. Main SuDS components used

Installation type: Integrated - Trees and stormwater soil cells: gully pots, attenuation tank, soakaway, gravel bed, permeable surfaces.

Figure 3 Buckland House Car Park construction phase (1)

Figure 4 Buckland House Car Park construction phase (2)

4. How it works

In light of the Council's guidance on soil volume requirements, Sherlock Boswell Architecture selected a soil cell system to provide the trees access to large volumes of un-compacted soil. The design goals were primarily to provide soil volume but after consulting with product suppliers the ability to use the trees to manage stormwater became an obvious benefit in adding water handling capacity to the site in a manner that increased functional capacity over time. The designers elected to optimize the cells and the ample soil volume they contained by also using them to manage the stormwater on the site, including run off from the roof.

A 55 square metre area of the roof (25% of the roof surface area) is designed to collect and direct rain water runoff via drain pipes into two gully pots (catch basins) at the perimeter of the building, where it is then dispersed throughout the soil cells. These are positioned one metre away from the road edge alongside the car park at Eastern Street, between Eastern Avenue and Southampton Road. An additional section of soil cells are also installed beneath two additional trees that were planted in a strip of land near the corner of the building. Stormwater enters into the soil cell system through the lawn surface and permeable surface of the car park. In total, 198 soil cell frames and 99 soil cell decks are installed in a two layer system alongside the car park, bringing each tree 18.7 cubic metres (660 cubic feet) of soil.

The soil cells also function to relieve and backup the overflow mechanisms in place for the other water-capturing methods on the site. Adjacent to the car park is a soakaway (a trench filled with stone), that captures run off on its way to an attenuation tank below the car park. The soil cells are located at a higher point than the soakaway, and capture water that passes through, thus slowing down the flow. If the attenuation tank reaches capacity, it overflows into a gravel bed placed between the soil cells and the attenuation tank. In the event that this gravel bed becomes saturated, the water may enter the soil cells via the aggregate layer under the porous pavement. Should the soil cell system reach capacity, the water can overflow into the gravel layer that is below the depth of soil cells. Altogether, the site is designed to handle a 100 year and 30% storm without any water leaving the site. Through the innovative method of collecting stormwater from the roof and utilizing the large soil volumes in the soil cells to serve as backup to other water capture methods on the sites, the trees are not only given superb growing conditions, but will put these conditions to work to keep the site sustainable for decades to come.

Figure 5 Buckland House Car Park (3)

5. Project details

Installation Date: October 2012

6. Project team

Project Designer: Sherlock Boswell Architecture

Contractors: Colten Developments Limited

Product suppliers: Deeproot - Silva Cell modular suspended pavement system

Derby Midland Station, retrofit tree pits, Derby

SuDS used

- Tree pits

Benefits

- Reduction in local flood risk.

1. Location

Midland Station Interchange, Railway Terrace, Derby DE1 2RU.

2. Description

Derby City Council laid out a plan to modernize the entrance and improve facilities at Midland Station, a major hub for the Midland Main Line. In addition to other improvements, they wanted to both grow large trees and attenuate water on site. The site had a limited drainage system that served the area poorly and was easily overwhelmed by storms, causing water to escape and flow over the footway and into the highway drainage systems, presenting serious issues for pedestrian and vehicular traffic.

Figure 1 Tree pits

The design team elected to create a new bus interchange at the main frontage of the station that included a traffic island on which 5 Silver Birch trees were planted. Below the ground, the traffic island was filled with a two-layer deep tree pit system that serves as a storage zone for runoff from the station's roof and surrounding area (see figure 1). This new drainage system combines existing flows and runoff to provide attenuation for all proposed storm events while also supplying a regular, natural irrigation supply to the new planting areas on the traffic island. Each tree receives 10 cubic metres of soil; the system helps capture water from a 4,000 square metre catchment area.

3. Main SuDS components used

Tree pits.

4. How it works

Figure 2 Construction of tree pit

The site's existing gullies, pipework and silt-trap/interceptor were decommissioned and a new carrier drain and channel was installed. The new carrier drain is 225mm in diameter, approximately 100m in length, and collects surface water runoff from an impermeable area of approximately 0.22 Ha. At its lower end, the carrier drain enters a chamber with a flow control and 500mm silt trap sump just inside the planting area. The on-going flow is restricted by means of a 100mm pipe that results in a build-up of water within the chamber. A 225mm diameter high-level outlet allows dissipation of the flows into a slotted pipe, and from here into a dedicated filter zone. From here the flows pass into the two-level soil storage area provided by the tree pit system. A backfill of angular stone lines the perimeter of the tree pit system, allowing water to pass through the soil and stone to reach a 150mm perforated pipe that provides a controlled outlet from the storage into the existing system where it joins roof runoff from the existing station building.

5. Project details

Installation type: Integrated - Trees and stormwater

6. Project team

Project designer: Derby City Council

Main contractor: Ringway

Contact for further information: DeepRoot Urban Solutions

Greening streets, retrofit rain gardens, Nottingham

SuDS used

- Rain gardens

Benefits

- Proven surface water capture and infiltration leading to reduced pressure on downstream sewer and watercourse.
- Increased understanding and awareness of the benefits of retrofit SuDS at a community and partner level.

1. Location

Ribblesdale Road, Sherwood, Nottingham, NG5 3HW.

2. Description

The setting is a quiet residential road, consisting of 67 properties. A grass verge with occasional mature trees runs the entire length of the road. There is limited parking pressure with most homes having provision for off-street parking.

Figure 1 a and 1 b Existing road layout

The road is adjacent to the Day Brook. This heavily modified watercourse has poor water quality due in part to numerous sources of urban diffuse pollution. In addition there are a total of 972 properties which fall within the Day Brook floodplain. Previous fluvial events have led to property flooding downstream.

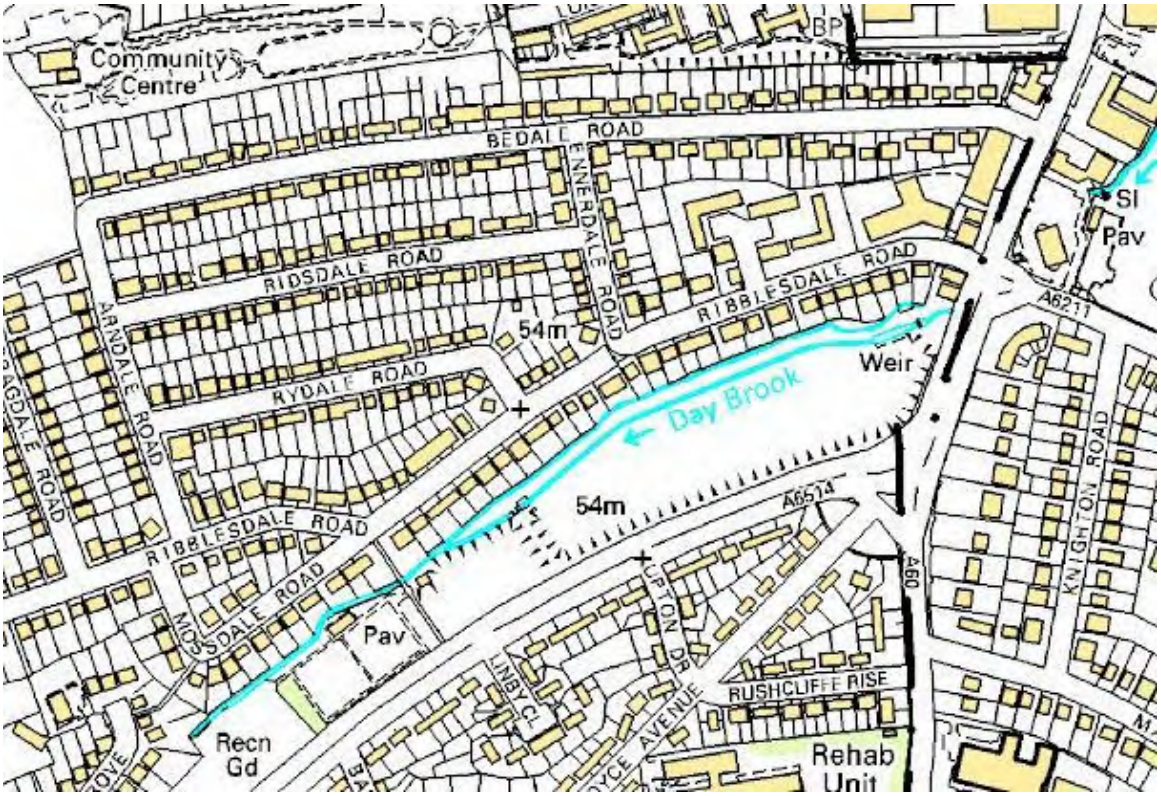


Figure 2 Ribblesdale Road and Day Brook

3. Scheme description

This pilot retrofit SuDS project was a result of collaboration between the Environment Agency, Nottingham City Council, Groundwork Greater Nottingham and Severn Trent Water. The construction phase was completed in May 2013.

The scheme was designed to achieve the following objectives:

- Document and evaluate the design and construction of a series of rain gardens within an existing highway setting;
- Maximise surface water interception, attenuation and infiltration;
- Test the effectiveness of rain gardens in managing surface water from the public highway;
- Encourage participation from local residents in the design and future management of the rain gardens;
- Evaluate the effectiveness of the scheme as an engagement tool around the sources of urban diffuse pollution and flood risk;
- Highlight the role that retrofit SuDS can play in improving the quality and reducing the volume of surface water flowing to urban watercourses.

Partners' contributions:

Groundwork

- Developed the outline and detailed designs;
- Helped secure support for the scheme from City councilors;
- Worked with the Highway Design team to ensure the scheme would integrate and interact well with the existing highway layout;
- Managed contract negotiation and implementation of the scheme;
- Led community consultation and facilitated the residents' liaison group.

Nottingham City Council

- Assisted with the design and technical development of the scheme;
- Safety audit of rain garden design undertaken by Traffic Safety team;
- Oversaw rain garden construction as Highway Authority;
- Ongoing maintenance of the rain gardens.

The Environment Agency

- Provided the capital funding through the Midland's MURCI Waters programme;
- Provided technical guidance on water quality and diffuse pollution;
- Lead for ongoing evaluation.

Severn Trent Water

- Built a surface water hydraulic model of the scheme;
- Assisting with ongoing evaluation.

4. Main SuDS used and how it works

A total of 21 linear rain gardens (total of 148m^2) were constructed within the grass verge, allowing for the constraints of access, below ground services, street furniture and trees. The rain gardens utilise a combination of clean stone aggregate and proprietary units to create void space beneath a planted topsoil layer. They were designed to capture runoff from 5500 m^2 of highway from a total surface area of 7100 m^2. The remaining surface area could not be incorporated into the scheme due to a number of mature trees clustered in one section of Ribblesdale Road.

The scheme was designed to manage surface water runoff from a 1:30 year event and to always intercept and treat the, often more polluted, first flush of highway runoff. Existing highway gullies have been retained to allow for overflow when the rain gardens reach capacity.

Proprietary water attenuation cells were a key part of the initial design as they provide significantly higher void space capacity than clean stone. However, budget constrains meant that the use of proprietary cells was reduced and replaced by stone fill in a number of gardens. It is hoped that differences in the performance of the 2 different rain garden designs will be evaluated over the coming years.

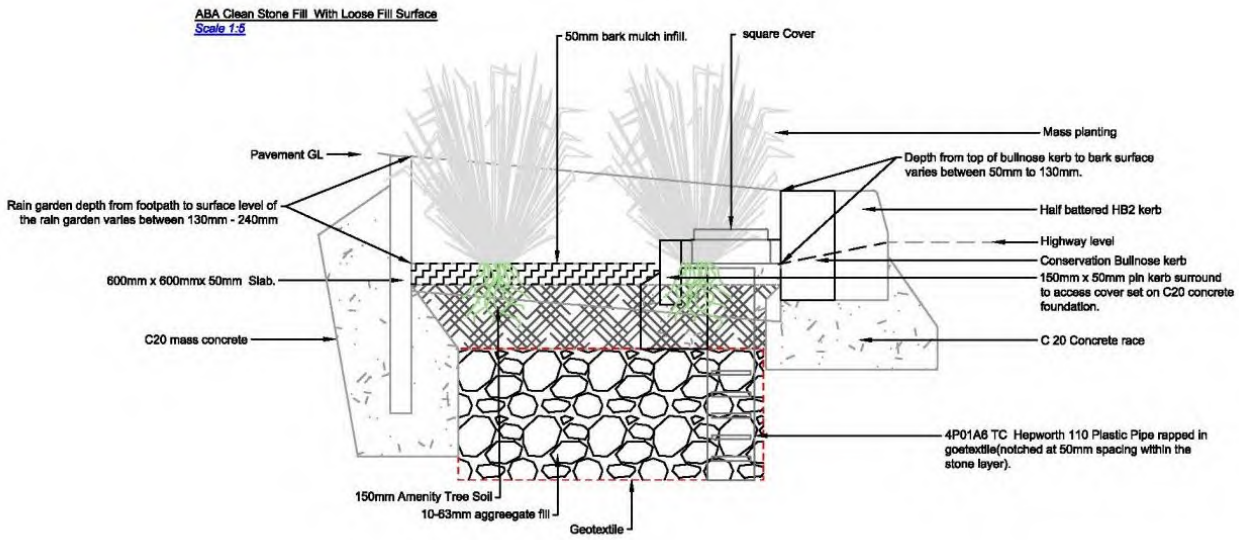


Figure 3 Section Drawing of the first rain garden design

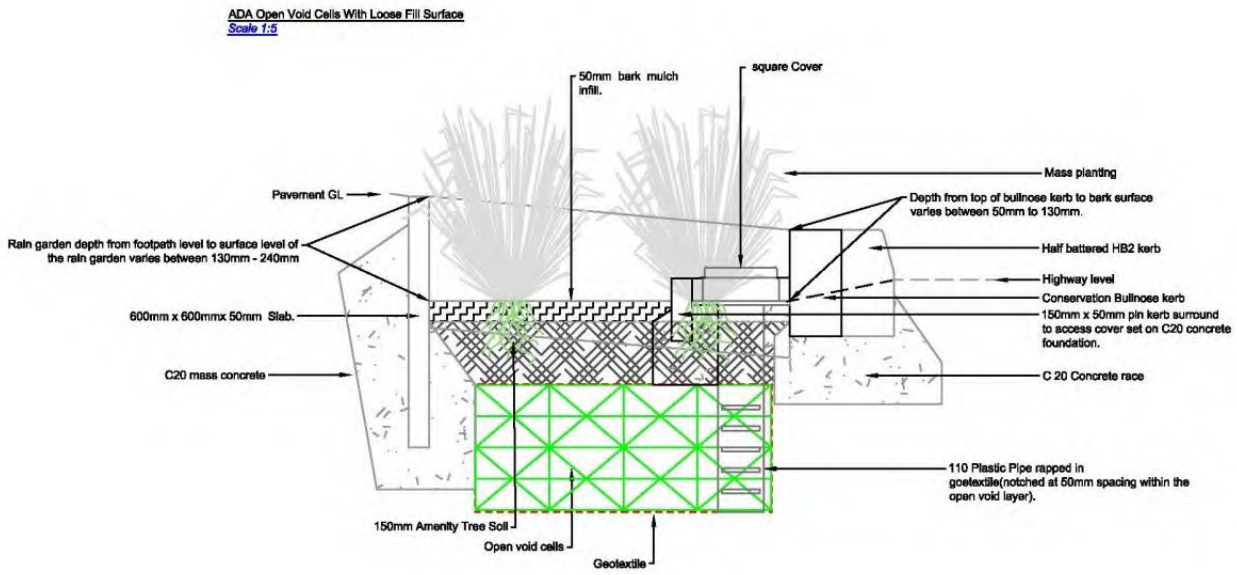


Figure 4 Section Drawing of the second rain garden design

Figure 5 Completed rain gardens (1)

Figure 6 Completed rain gardens (2)

5. Plant selection

The following plants were used in three combinations with Stipia being used throughout:

- Stipia arundinacea
- Carex ‘evergold’
- Miscanthus Yakushima Dwarf
- Festuca blue fox

Plant selection for the rain gardens was influenced by the following:

1. Need for tolerance of wide fluctuations in soil moisture levels from inundation to long dry periods, exacerbated by a highly permeable growing media;
2. Provision of sufficient structure to assist pedestrian and driver differentiation between footpath, road and rain garden without blocking sight lines;
3. Use of evergreen species to reduce leaf debris in the rain gardens and the associated maintenance;
4. Aesthetics.

Semi-mature plant stock was used to ensure there was sufficient plant structure from completion of the rain gardens.

6. Maintenance

The existing and predicted maintenance regimes were reviewed prior to construction. It is expected that maintenance of the rain gardens will be limited to an annual trim of the vegetation, with occasional mulching and clearing of the inlet.

As the rain gardens were constructed within existing grass verges, the reduction of grass cutting will off-set the cost of the new maintenance regime.

7. Costs

Capital costs for the project were £68K. Staff time was also provided by Nottingham City Council and the Environment Agency. Groundwork's time for design and community engagement was paid for by the overall project budget.

The project delivered 148m^2 of rain garden which equates to £460 per m^2. The cost for rain gardens filled with aggregate was around £300 per m^2 but was significantly more where attenuation cells were utilised.

8. Evaluation

The scheme has been designed to facilitate on-going evaluation of the rain gardens.

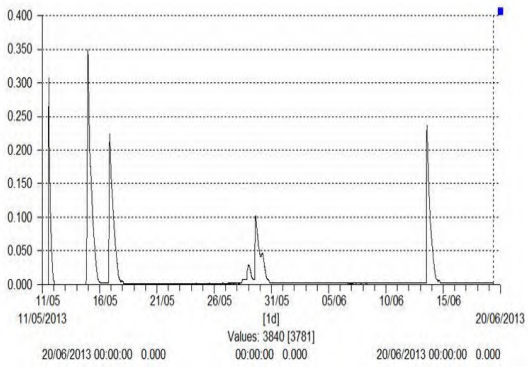


Figure 7 Water level within rain garden void following 5 rainfall events in June 2013

The installation of a data logger provides continuous water depth recording within the void space beneath one rain garden. The data obtained shows how the rain garden performs during and after rainfall. Variation in rain garden performance will be monitored over time.

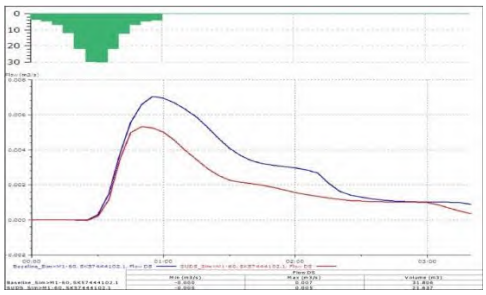


Figure 8 Model output showing reduced peak in sewer flow (in red)

In addition, initial results from the InfoWorks CS 2D model of the scheme suggest a 33% reduction in the flow reaching the sewer during a 1 in 1 return period storm.

A survey of local residents was also undertakenb. The 17 residents who responded to the survey (25% response rate) have provided a mixed picture of opinions. Some residents remain incredibly supportive of the scheme and are "*absolutely delighted*" with the finished rain gardens. Others dislike the rain gardens and feel that, in particular, they have taken away parking space or created a hazard for pedestrians or cyclists.

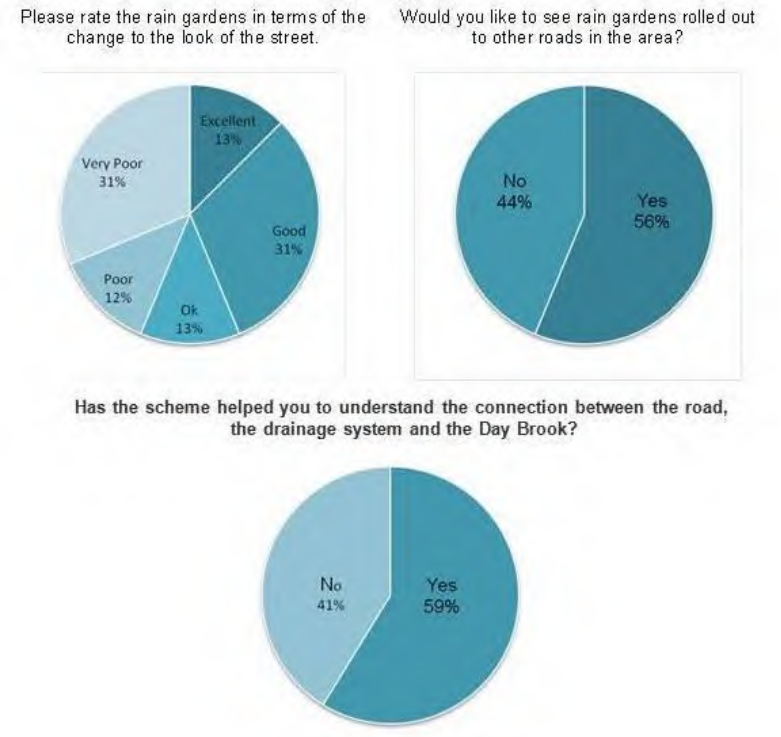


Figure 9 Results of resident survey

9. Benefits

- SuDS retrofit scheme delivered through partnership;
- Proven surface water capture and infiltration leading to reduced pressure on downstream sewer and watercourse;
- Increased understanding and awareness of the benefits of retrofit SuDS at a community and partner level.

10. Challenges & lessons learnt

The following challenges were managed during the project;

- Limited time to design and construct the scheme;
- Varying support for the scheme amongst residents and general lack of understanding of how surface water contributes to flooding and poor water quality;
- Safety concerns – residents and safety audit helped refine rain garden design.

11. The future

Evaluation of the project will continue over the next twelve months.

The partners will work to promote the multiple benefits of retrofit rain gardens and use the results of the pilot to influence future surface water and fluvial flood defence schemes.

12. Project details

Status: Constructed, May 2013

Version: November 2013

13. Project team

Project Lead and Designer: Paul Crawford, Landscape Architect, Groundwork Greater Nottingham

Funding and Diffuse Pollution: John Brewington, Programme Manager, Environment Agency

Highways Design and Drainage: Chris Capewell, Team Leader, Highway Design, Bridges & Drainage, Nottingham City Council

Highways Design & Contract Engineer: Frank Knapp, Highways Design Engineer, Nottingham City Council

Contractor: Direct Labour Organisation (DLO), Nottingham City Council

Queen Caroline Estate, London

SuDS used

- Green roofs
- Rain gardens
- Basins
- Permeable paving

Benefits

- Reduction in flooding from intense rainfall.
- Reduced surface water pollution to receiving water bodies.
- Unused uninspiring landscape converted to diverse, attractive, multi-functional space.

1. Location

Queen Caroline Estate, Queen Caroline Street, London Borough of Hammersmith & Fulham, W6 9BS.

2. Description

The project was completed as part of the LIFE+ Climate proofing Social Housing Landscapes project. It has delivered packages of low-cost retrofit sustainable drainage solutions across three social housing estates in the London Borough of Hammersmith & Fulham. By targeting social housing sites the project helps to reduce deprived communities' vulnerability to climate change. This case study covers the works undertaken on Queen Caroline Estate. A separate case study is available for one of the other sites, Richard Knight House.

3. Main SuDS components used

The following SuDS components were used on this site:

- Green roofs
- Rain gardens
- Basins
- Permeable paving.

4. How it works

The various SuDS components have been integrated within the housing estate landscape using a combination of roof space, pavement, car park, estate road and soft landscaped areas. The estate's surface water drainage is connected to the combined sewer system. When asked about the estate prior to construction of the SuDS, residents complained about the lack of colour in the landscape and poor connectivity between the street and the river (see figures 1 and 2).

Figure 1 Prior to SuDS construction

Figure 2 Central courtyard with restricted access (prior to SuDS project)

142m^2 of extensive biodiverse green roofs have been installed on bin stores and pram sheds (figure 3). These buildings have flat or shallow-domed concrete slab roofs and drain via downpipes to the adjacent paving. A new waterproofing liner was applied to the concrete roofs and a pebble filled gabion edge used to create a retaining structure for the green roof substrate. The roofs were planted with wildflower seeds and plugs.

Figure 3 Green roof

Rain gardens have been installed within paved areas and alongside estate roads to drain the adjacent hard-standing and, in one case, a section of the roof of an adjacent building. The rain gardens were filled with an engineered rain garden soil and planted with a mix of shrubs and perennials. Each rain garden has a vertical entry overflow which connects via a flow control chamber back to the sewer. The weir in the flow control chamber is set to the design storm water limit. If the water level exceeds this limit, water will overtop the weir in the flow control chamber and be released back to the sewer un-impeded.

Queen Caroline Estate has an open structure with fairly large areas of open space between the residential blocks. Many of the residential blocks have pitched roofs that drain to external downpipes. This combination opened up the possibility of introducing vegetated channels, swales (figure 4) rain gardens and small-medium sized basins to manage run-off from roofs and paving. The majority of components are connected via flow control chambers to the sewer, with the exception being the segmented swale at Alexandra House which, if required, overflows to a soakaway. The

main features adjacent to Beatrice, Margaret, Adella, Phillippa and Alexandra Houses have the capacity to manage a 1 in 100 year storm event. The overflows comprise horizontal entry pipes set 75-100mm off the base of the feature. The flow control chambers are of a slide-up weir design with a 20mm orifice protected by a debris screen. The weir in the flow control chamber is set to the design water limit, which is typically 300-350mm off the base of the feature.

Figure 4 Swale

In soft landscape areas runoff has been diverted from downpipes via pebble or vegetated channels to shallow basins/rain gardens planted with wildflower turf (figure 5). In paved areas, “stony” basins have been introduced which combine an outer skirt of permeable resin bound aggregate and

planting beds, with a central area of loose aggregate and planting at their base. The use of stony basins reflects the Council's requirement to minimise increases in soft landscape to avoid significant changes to maintenance (figure 6). The basins are approximately 30% soft landscape and 70% hard landscape. Their design was developed through consultation with residents, who were concerned that larger loose aggregate might be picked up and thrown as a weapon, and with maintenance contractors, who were concerned that loose aggregate near path edges might be easily transferred to grass areas where it would interfere with grass cutting. The basins and adjacent landscaping include informal play features, including bridges, mounds, stepping logs, balance beams and boulders.

Figure 5 Detention basin

Figure 6 Stony detention basin

Prior to the works the estate had several large unused paved areas, which were originally installed as drying areas. These have been replaced with permeable hard landscape, comprising stony basins (described above) permeable paving, composite decking and schotterrasen (Austrian gravel lawn).

A vertical rain garden is proposed for the end façade of Mary House, which will combine sections of plug-planted green wall with climbing plants. Both will be irrigated from water collected from the roof of Mary House. One of the existing downpipes will be diverted into a series of narrow stacked tanks which will drip-irrigate the plug planted section of the wall. The overflows from the tanks and the plug planted section of the wall will feed into a raised planter at the base of the wall which will be planted with climbing plants. Any remaining overflow from the system will drain to the adjacent rain gardens.

5. Specific project details

The selection of SuDS components was informed by site surveys to map existing vegetation, drainage patterns, use patterns, access and movement etc. Residents were engaged in pre-design conversations to identify any problems with drainage (e.g. water pooling/ponding and leaky roofs) or overheating within flats, and their priorities for improvements to the open space. Following the identification of a long-list of potential SuDS components, the collected data was used to inform a multi-criteria assessment to determine a short-list of options to take forward to design.

Resident engagement was undertaken throughout the design and construction phase using a combination of on-site consultation events, door knocking and leaflet drops. A member of the project team also attended Tennant and Resident Association (TRA) meetings to keep residents

informed of project progress. Engagement suggested the residents wanted a more interesting and colourful landscape as well as opportunities for food growing (figure 7).

Figure 7 Swale and food growing

6. Maintenance and operation

From the start of the project the Council made it clear that net increases in maintenance were to be avoided. With this in mind, the green roofs have been designed to minimise maintenance after initial establishment, and increases in planted areas at ground-level have been restricted (<30m^2), for instance through the use of stony basins. The small increases in planted area have been offset by reducing the maintenance requirements of other soft-landscaped areas, for instance by reducing the mowing regime for some grass areas by replacing standard mown amenity turf with wildflower turf that only requires cutting 2-3 times a year. By engaging residents in their open spaces through the informal play features, better access and the establishment of food growing groups, residents are encouraged to support the long-term management and maintenance of the spaces.

Design review meetings, held at each design stage, were attended by the Council's maintenance contractors. These meetings provided the opportunity for the maintenance contractors to ask questions and voice concerns. The designs were adapted on a number of occasions in response to the input received (e.g. stony basin design).

Groundwork Green Teams maintained the spaces for the first 9 months following practical completion. Green Teams provide structured programmes that enable young unemployed people to

learn new skills, gain qualifications and enhance their employment prospects whilst delivering valuable environmental improvements in neighbourhoods. In April 2016, maintenance responsibility for the site passed back to the Council's maintenance contractors. To support this process a one day training course was delivered for maintenance operatives to introduce them to the SuDS components and specific maintenance requirements.

7. Benefits & achievements

- Unused uninspiring landscape converted to diverse, attractive, multi-functional space;
- 142m^2 of biodiverse green roofs;
- Run-off from 1750m^2 of impermeable surface has been diverted from draining directly to the sewer (i.e. green roof, SuDS with controlled overflow or total disconnection);
- 32m^2 of new food growing beds for residents;
- The capital works were delivered at the same £/m^2 rate as equivalent non-SuDS landscape improvements (based on a sample of 15 Groundwork London projects undertaken on social housing estates in the London over the past 3 years);
- The project received almost universal support from local residents:

  "Every time I come outside, it looks so beautiful I could cry". Shirley Culpit, Chair of Tenants & Residents Association (TRA).

  "The project has made many improvements to the look of the estate, as well as helping to gel our community together." Ros O'Connell, Treasurer of TRA.

  "It looks beautiful and has brightened up the estate. Walking along it, I felt as if I was walking through a new private development." Phillip Lee, Housing Officer, LBHF.

8. Challenges & lessons learnt

- Involving residents in the mapping of strengths, weaknesses, opportunities and constraints helps to develop a detailed understanding of how the space is used and the everyday problems that residents encounter. This information can then be used to ensure that the installed measures address both broader concerns, e.g. local flood risk, and immediate resident issues, e.g. surface water pooling or a desire for food growing space;
- Below ground services surveys including CAT scanning and ground-penetrating radar were undertaken to support the design and construction of the SuDS measures. Despite this, unrecorded shallow telecoms and electrical cables were found on site that required designs to be amended to accommodate them;
- Landscape improvements other than (or combined with) SuDS features (e.g. food growing areas) provide an opportunity to engage residents in their open space, providing practical benefits in terms of site maintenance and wider community benefits in terms of health & well-being and increased resident interaction.

9. Interaction with local authority

Groundwork London has worked in partnership with the London Borough of Hammersmith & Fulham to deliver the project. The Councils Housing Department and Flood Risk team were involved in the realisation of the project.

10. Monitoring and evaluation

The University of East London is undertaking monitoring on the site. Performance of the ground-level SuDS components is being monitored using weather stations, flow sensors (downpipes), pressure sensors (in basins) and time-lapse photography. In addition, thermal imaging is being used to record the cooling effect of both the ground-level SuDS components and green roofs.

Wider benefits of the scheme, for instance for health and recreation, crime reduction and environmental education benefits, are being evaluated using a combination of the CIRIA's BeST and the Social Return On Investment (SROI) model designed by the New Economics Foundation. The monitoring and evaluation reports are available on the project website.

11. Project details

Construction completed: July 2015

Cost: £226,000 (capital costs)

Extent: 2340 m^2

12. Project funders and partners

EU LIFE programme

London Borough of Hammersmith & Fulham

Greater London Authority

13. Project team

Landscape Architects, Community Engagement, LIFE+ Project Lead: Groundwork London

LB Hammersmith & Fulham departments: Housing, Flood Risk & Planning

Drainage advice & calculations: EPG Ltd

Technical advice: The Ecology Consultancy & Green Roof Consultancy

Green roof contractors (residential): n/a

Green roof contractors (ancillary buildings): Organic Roofs

Landscape contractors: Greatford Garden Services Ltd

Standard Conditions for Works Adjacent to Pipelines

Document Ref. 90048

Issue 3.1 July 2015

AMENDMENT SUMMARY

Amendment No. Date	Brief Description and Amending Action	Owner	Verifier
3.1 July 2015	'Easement Area' defined and legal clarifications made.	Neil Sixsmith	Jim Tresnan
3.0 March 2015	Full review and update	Neil Sixsmith	Jim Tresnan
2.0 May 2014	Full review and update. Appendix 1 incorporated to provide guidance on tree roots and planting. Improvements to document around vibration monitoring and discolouration	Peter Tucker	Nick Preston
1.2 October 2007	Alterations into Distribution Manual	Richard Duckett	
1.1 August 2007	Alteration to Guideline number 12	Paul Gough	Tony Conway
1 July 2003	First issue in standard format	Phil Hayden / Ian Skilling	Peter Womersley

HISTORY OF THE DOCUMENT

The following table details the task team involved in the full review of the Standard Conditions:

Date and Issue Number	Task Team members
3.0 March 2015	Peter Tucker – UU Engineering Nick Preston – UU Engineering Jim Tresnan – UU Engineering Neil Sixsmith – UU Water Services (Network) Owen Newton - UU Engineering Mike Taylor – UU Water Services (Network)

CONTENTS

1. SCOPE

This document sets out United Utilities Ltd (UU) standard conditions for work carried out over, under or adjacent to a UU Pipeline which can include multiple UU Pipelines laid adjacent to each other.

It is UU company policy not to allow any building over UU Pipelines or water mains. Any such building / structure would compromise UU's obligation to maintain a constant water supply and, in particular, would obstruct UU's ability to respond in the event of a failure of the Pipeline. Building over mains also has potential risks to the health and safety of anyone who might be affected by a failure, including the occupants of the building.

2. DEFINITIONS

Term	Definition
Pipeline	Means any aqueduct, trunk main, water distribution main, multiple pipes laid adjacent to each other or non-potable main vested in UU as water undertaker.
Easement Area	Means the easement specified in any relevant document, e.g. conveyance, transfer or deed of grant with such widths as specified therein.
Easement Width	Means the Easement Width for any Pipeline laid under statutory powers. For large diameter Pipelines, unless otherwise specified, the Easement Width shall extend 5 metres to each side of the Pipeline from its centreline (10 metres total width). For small single Pipelines of up to and including 300mm diameter, unless otherwise specified, the Easement Width shall extend 3 metres to each side of the Pipeline from its centreline (6 metres total width) Contact UU for specific Easement Width limits and conditions.
Street	The whole or part of any highway, any road, lane, footway, alley or passage, square or court, whether or not a thoroughfare. A Street can therefore be a footpath, cycle track, bridleway or full vehicular highway. Where a Street passes over a bridge or through a tunnel these are included as part of the Street.
PPV	Peak Particle Velocity
Shall or Must	Mandatory requirements are adopted through the use of 'shall' or 'must' or are otherwise specifically stated. The document also contains information and guidance that is not mandatory but is provided for consideration.
Stopping up Order	An order authorising the stopping up (removal of public rights of way) of any highway, if the Secretary of State is satisfied to do so, to allow development to be carried out in accordance to a valid and relevant planning permission granted under the Town and Country Planning Act 2008 as amended or re-enacted from time to time.
Promoter	Any utility company, self-lay organisation, developer, Highway Authority, Local Authority or any other organisation wishing to work adjacent to or cross over or under a UU Pipeline.

3. GUIDELINES

3.1. General Guidelines

3.1.1. The Standard Conditions are issued for the guidance of Promoters and others to reduce the risk of damage to the Pipeline and the consequent liability for such damage. They do not replace or alter any powers or rights exercisable by, or protection afforded to UU by virtue of: -

a) Its ownership of the Pipeline or any rights or privileges in relation thereto;

b) Any conveyance, lease, deed or grant, easement (see Figure 1 Easement Widths), licence, wayleave or other legal document relating to the Pipeline;

c) Any statutory provision (including any provision in subordinate legislation) including but not limited to: -

i. The Water Industry Act 1991 as amended or re-enacted from time to time, will also apply.

ii. Any local statutory provision relating to a Pipeline and to any work of any other body or person which regulate, either generally or in relation to any specific crossing or work, the relations between UU and such other body or person, including any agreement or other document referred to in or incorporated with any such statutory provision.

In the event of any inconsistency between the provisions of these Standard Conditions and those of any document or statutory provision mentioned above, the latter shall prevail unless capable of variation by agreement and the substitution of the relevant provisions of these Standard Conditions is expressly agreed.

3.1.2. The Standard Conditions apply to all Pipeline(s). In the case of Pipeline(s) located in streets, the provisions of the New Roads and Street Works Act 1991 and the Traffic Management Act 2004, as amended or re-enacted from time to time, will also apply.

3.1.3. No work of any description shall take place on or within the Easement Area or Easement Width before full agreement has been reached with UU regarding the manner in which the work shall be carried out and consent to the same has been given in writing. At least 28 days' notice shall be given of any intention to carry out works in the Easement Area or Easement Width.

3.1.4. No vehicle, plant or machinery is to stand, operate or travel within the Easement Area or Easement Width of the Pipeline except as agreed by United Utilities.

3.1.5. UU reserves the right to supervise any work carried out on or within the Easement Area or Easement Width and to recover the costs incurred.

3.1.6. No buildings / structures of any description shall be erected within the Easement Area or the Easement Width.

3.1.7. No service shall cross the Pipeline at less than 1 metre in front of a socket face or at less than 300mm behind it. (See Figure 2)

3.1.8. No materials including spoil shall be placed on or stored within the Easement Area or Easement Width.

3.1.9. Access to and along the Easement Area or Easement Width shall be kept clear and unrestricted at all times. See Section 7, 'Easement Infringements'.

3.1.10. Sanitary arrangements approved by UU shall be provided for persons working on or within the Easement Area or Easement Width. Precautions shall be taken to avoid spillage of fuels, oils, paints, solvents or any other substance, which may damage the Pipeline or its protection.

3.1.11. Where construction of a new structure / building is proposed within 1m of the edge of the Easement Area or Easement Width, its foundations shall be designed to ensure that load from the structure / building is not transferred onto the Pipeline. The design shall also ensure that UU has full access to the lowest point of the bedding of the Pipeline for maintenance or construction purposes

3.1.12. No alteration to the existing ground levels or surface use of the Easement Area or Easement Width shall be made without prior written consent from UU. At least 28 days notice shall also be given of any proposal to alter ground levels or the surface of land adjoining the Easement Area or Easement Width. This includes increasing the ground level above the Pipeline by placing material to form a landscaping bund or road (or other) embankment, as this has the potential to cause settlement to the Pipeline that could damage it.

3.1.13. Persons or their Promoters working on or within the Easement Area or Easement Width shall be required to indemnify UU for the full cost of any damage caused to its Pipelines and for any costs, charges and expenses resulting from these operations.

3.1.14. In an emergency, contact shall be made immediately using the following telephone number:

The UU Response Manager is available on-
07713887302 and this number shall be used for EMERGENCIES ONLY
e.g. if the UU Pipeline is damaged / burst the UU response Manager must be contacted immediately.

Please supply the UU Response Manager with the following information:

Who you are (name and company)?

What is your contact number?

Exactly where you are (in order to quickly identify which main is damaged and potential risks to UU)?

What is the damage?

Is it causing flooding?

Is flood water entering a watercourse?

4 ISSUES AFFECTING A PIPELINE DURING CONSTRUCTION ACTIVITIES

4.1. Temporary Access

4.1.1. Movement of vehicles and plant with a total weight exceeding 6 tonnes across the unprotected Pipeline is forbidden. The repetitive movement of vehicles or plant of any weight over the unprotected Pipeline in the same position is forbidden. Where temporary or permanent access is required, the Promoter must consult with UU prior to gaining access.

4.1.2. Each proposed temporary crossing point of a Pipeline shall be considered on an individual basis. The Promoter shall submit the design of the proposed crossing point

to UU for acceptance. Work to construct the temporary crossing point shall not commence without prior written consent from UU.

4.1.3. The Promoter shall design any temporary crossing point such that the load from any vehicle or any item of construction plant that will use the crossing point creates a suitably factored bearing pressure of not more than 8.5kN/m2 at the crown of the UU Pipeline. (N.B. *This load is approximately equivalent to the loading on a Pipeline with 900mm of cover when a 6 tonne excavator crosses above it.*) In order to achieve this, the Promoter may use substantial timber baulks, reinforced concrete slabs or proprietary ground protection systems (e.g. Eve Trakway). Where it is not possible to distribute the surcharge load from the plant to less than 8.5kN/m2 at the crown of the Pipeline, then the design of the temporary crossing point shall consist of a suspended crossing which bridges over the Pipeline.

4.1.4. Temporary crossing points shall only be used to allow vehicles and plant to traverse across a Pipeline. Temporary crossing points are not to be used as working platforms for construction plant. Plant shall not be allowed to operate above a UU Pipeline unless specific written consent is given by UU. Any request by a Promoter for them to site working plant above a UU Pipeline must demonstrate that the platform which their plant is to be sited on has been designed as a working platform and will ensure that the maximum surcharge load from that plant is distributed to less than 8.5kN/m2 at the crown of the Pipeline, or bridges over the Pipeline.

4.1.5. All parts of a temporary crossing point must be removed when the work is complete, unless written consent is obtained from UU for the crossing to be left in place. The design and construction of the temporary crossing point shall be such that it permits for its removal (and the reinstatement of the ground beneath it) without exposing the Pipeline to undue loading, vibration or risk.

4.2. Temporary Fencing

4.2.1. Fencing shall be erected by the Promoter when they are working in and around the Easement Area or the Easement Width to demarcate its location, to regulate vehicle movements and to confine the crossing of the Pipeline only to approved crossing points. The fencing shall be of substantial construction. It shall be adequately maintained at all times to the satisfaction of United Utilities.

4.3. Excavations within an Easement Area or Easement Width

4.3.1. Prior to general excavation, trial holes shall be dug by hand to determine the precise location of the Pipeline. UU reserves the right to carry out such excavations. The cost of all such excavations shall be borne by the Promoter.

4.3.2. Excavations shall be fully supported and shall be backfilled to the satisfaction of UU. All work shall be carried out during normal working hours, which shall have been previously agreed with UU. UU reserves the right to stop all work on or within the Easement Area or Easement Width which, in the opinion of its officers, places the Pipeline at risk. As a consequence of such action, UU shall not accept any claims for financial loss.

4.3.3. All excavations within the Easement Area or Easement Width shall be carried out by hand or may be carried out by mechanical excavator if under the supervision of UU personnel. Excavation within 1 metre of the Pipeline(s) must be carried out by hand and great care must be exercised to ensure that any protective wrapping is not damaged.

4.3.4. If a thrust block is discovered within any excavation adjacent to a Pipeline(s), then work shall be stopped and the excavation backfilled as soon as possible.

4.4. Ground Vibration

4.4.1. No blasting shall be carried out within 300 metres of the Pipeline(s) without prior written consent from UU, unless it can be demonstrated that ground vibration from such activities shall not exceed a peak particle velocity (PPV) of 5mm/s in any plane at the closest point of the Pipeline(s) to the blast.

4.4.2. Demolition, piling, tunneling or any other construction technique which induces significant vibration (not exceeding a peak particle velocity of 5mm/s) shall be permitted up to 10 metres away from the Pipeline(s). Permission will be granted by UU provided that the Promoter has accurately established the position of the Pipeline(s) and this has been verified by UU and a written statement of the precautions to be taken to ensure the safety of the Pipeline(s) has been submitted by the Promoter and received and consented to by UU prior to works being undertaken.

4.4.3. Should demolition, piling, tunneling or any other construction technique which induces significant vibration be proposed within 3.5 - 10 metres of the Pipeline(s) this shall be subject to seismic monitoring in order to prevent damage to the Pipeline(s). The Promoter shall accurately establish the position of the Pipeline(s). Seismograph readings shall be taken by the Promoter's specialist organisation on the line of the Pipeline at locations to be agreed with UU. Vibration monitoring shall be done under the supervision of a specialist organisation which has significant experience of similar monitoring work. The identity of the specialist organisation shall be proposed by the Promoter and approved by UU. This approval should not be unreasonably withheld or delayed. The cost of the seismic monitoring shall be borne by the Promoter. Vibration shall be measured in terms of peak particle velocity (PPV) and the Promoter shall employ suitable methods of construction in carrying out its works such that the PPV does not exceed 5mm/s. If the measured PPV does exceed 5mm/s then work shall cease immediately and a review of the monitoring data shall be undertaken between the Promoter and UU Engineering staff. If necessary UU shall notify the Promoter of any reasonable mitigation measures to protect the Pipeline(s) that it requires the Promoter to carry out. The Promoter shall comply with these reasonable mitigation measures in carrying out its works. A written statement of the precautions to be taken to ensure the safety of the Pipeline(s) shall be submitted by the Promoter and received and approved by UU prior to works being undertaken.

4.4.4. If UU identify that there is a risk of discolouration of the potable water supply the Promoter shall not excavate within 1m of the Pipeline(s) in any plane. Given the fact that there shall be significant excavation by hand, it may be more economical for the Promoter to consider directional drilling or another form of trenchless technique. UU would prefer this as an alternative construction technique.

4.4.5. Where practical, and when requested by UU due to the risk of discolouration, downstream turbidity monitoring should be undertaken for potable water Pipelines irrespective of Pipeline diameter. If UU reports to the Promoter that the turbidity levels measured in the main are very close to or exceeding the regulatory standards then work shall cease immediately and a review of the monitoring data shall be undertaken between the Promoter and UU Engineering staff. If necessary UU shall notify the Promoter of any reasonable mitigation measures to protect the Pipeline(s) that it requires the Promoter to carry out. The Promoter shall comply with these reasonable mitigation measures in carrying out its works.

5 ISSUES PERMANENTLY AFFECTING A PIPELINE OR EASEMENT

5.1. Permanent Access

5.1.1. Any proposed crossing of the Pipeline shall be considered on an individual basis. Any permanent access crossing the Easement Area or Easement Width shall be designed

and constructed by the Promoter to prevent any damage to the Pipeline. This may typically consist of mass concrete filled trenches constructed on either side of the Pipeline(s) with reinforced concrete slabs spanning between them. The Promoter shall submit the design of the proposed crossing point to UU for acceptance. Work to construct the permanent crossing point shall not commence without prior express written consent from UU.

5.2. Permanent Fences and Boundaries

5.2.1. Fences or other boundaries structures crossing the Easement Area or Easement Width shall be as near as possible perpendicular to the line of Pipeline and in no case shall be made at an angle of less than 45 degrees. Proposals for any new fences or other boundary structures shall be submitted to UU for approval. Where necessary a lockable gate shall be provided for UU for their sole use.

5.3. Installation of New Services within the Easement

5.3.1. Any pipes, drains, electricity cables or sewers crossing unmade ground over or under the Pipeline shall be laid in steel conduit or ductile iron pipe ideally unjointed (or similar UU approved material) and adequately supported so as to be self-supporting over any subsequent excavation which may have to be carried out i.e. they should extend well into the undisturbed ground at each side of the Pipeline trench and shall cross as near as possible to 90 degrees to the Pipeline.

5.3.2. In no case shall any crossing be made at an angle of less than 45 degrees.

5.3.3. Provided that ground conditions are suitable, pipes crossing below the Pipeline shall be constructed by an approved tunneling method, and agreed by UU. The Promoter shall demonstrate that the predicted - and actual - ground settlement at the level of the invert of the Pipeline as a result of their pipes crossing below the Pipeline is not more than 20mm.

5.3.4. For UU Pipelines up to and including 300mm diameter, any pipes drains, electricity cables or sewers laid adjacent to the Pipeline must have a minimum clearance of 300mm from it. For UU potable water Pipelines over 300mm diameter (or for smaller diameter Pipelines where UU network operations have highlighted a risk of discoloration), there shall be a clearance between the pipes, drains, electricity cables or sewers and the Pipeline that is greater than or equal to the diameter of the Pipeline (ideally at least 1m clearance if possible to reduce the risk of discoloration). These clearances shall apply to crossings above or below the Pipeline, and include pipes, drains, electricity cables or sewers laid adjacent to the Pipeline.

5.3.5. The Promoter shall exercise suitable care when selecting and placing backfill material for any excavation dug within the Pipeline Easement to ensure that it is adequately compacted, provides sufficient support to the Pipeline and will not cause damage to the Pipeline. Reference should be made to the current version of 'Civil Engineering Specification for the Water Industry' (CESWI).

5.4. Cathodic Protection of Pipelines

5.4.1. Where cathodic protection is proposed for the Promoter's works, or where it exists in connection with UU's Pipeline, the Promoter shall take all necessary steps to ensure that the integrity of the system is maintained during the construction of the works. Where cathodic protection exists on UU's Pipeline, or is to be installed by the Promoter on his apparatus, interference tests shall be carried out on completion of the works at the Promoter's expense. Where such tests indicate that UU's Pipeline may be at risk, then the Promoter, at his own expense, must install suitable remedial measures, to be agreed by UU. UU must be consulted in the case of installation of electric tramways over Pipelines.

5.5 Mains Adjacent to Buildings in Streets

5.5.1 Water mains may be laid in a Street or an Easement Area
Sometimes this is immediately adjacent to a building. In the case of an Easement Area, new buildings and their foundations may not be built within 2.5m of an existing water main (5m for mains > 300mm). This is to facilitate repair and maintenance.

5.6. New Roads, Communal Parking and Driveways

No alteration to the surface use of the Easement Area or Easement Width for the purpose of constructing a road, communal parking or private driveways (except for vehicular crossings at >45degrees) shall be made without prior written consent being obtained from UU.

6 PLANTING NEAR TO PIPELINES

6.1 Written consent must be obtained from UU before any tree or shrub planting is carried out. Any consent is subject to UU retaining the right to remove, at any time, all trees or shrubs that in its opinion becomes a danger or nuisance to the pipeline or asset.

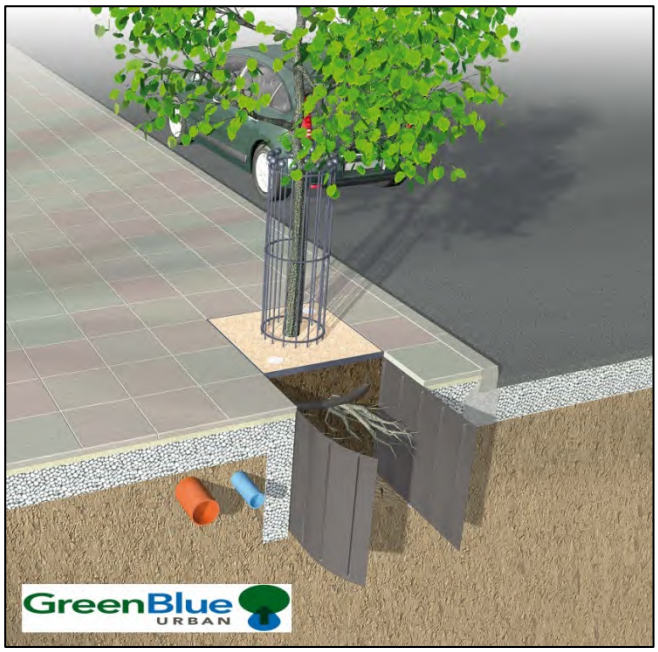
6.2 Selection and planting of tree species should be in accordance with BS8545:2014 Trees: from nursery to independence in the landscape. Recommendation.

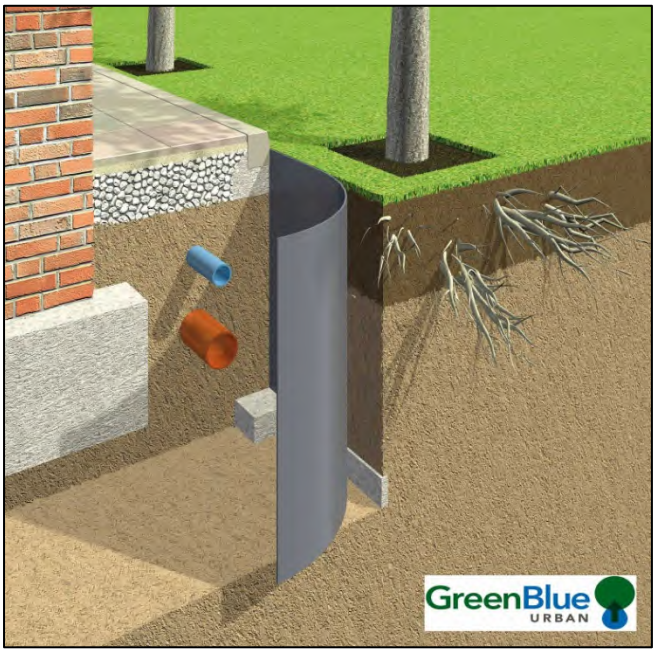
6.3 Planting of shallow rooted hedge plants, domestic soft fruiting bushes and ornamental shrubs shall be permitted however these shall not be permitted to develop as shrub trees and shall be maintained by the Promoter / Owner to a maximum height of 1.5m.

6.4 There shall be strictly no planting of Poplus ssp. or Salix ssp. within 10 metres of a Pipeline.

6.5 Restrictions apply to all Easement Areas and Easement Widths see Appendix 1 for details. This includes a non-exhaustive list of trees and recommended planting distances.

6.6 United Utilities will consider the provision of specific tree root barriers where there is a need to establish trees closer to Pipeline(s) than would normally be acceptable best practice. Vertical or horizontal barriers can be effective and acceptable so long as they are professionally specified and installed following manufacturer's instructions and a suitable distance from the tree trunk to ensure tree stability at maturity. See the figures below for typical examples of these methods. These barriers shall be 1 – 2mm thick semi rigid type and be fitted by either a specialist installer or by very closely following the manufacturer's guidance. Further advice about root barriers can be found in BS8545.





Images supplied by GreenBlue Urban

6.7 A useful publication that can assist with planting near to utilities is *"NJUG Guidelines for the Planting, Installation and Maintenance of Utility Apparatus in Proximity to Trees"*

7 EASEMENT INFRINGEMENTS

7.1 UU acknowledges that there are situations where structures have been erected either directly above the Pipeline, or within an Easement Area or Easement Width. These encroachments should be assessed and recorded and appropriate actions taken. The assessment shall consider the potential risks to both UU's asset and the structure upon it.

7.2 The options available to UU are:-

a) Notify owner of risks

b) Notify owner and consider mains diversion at owners cost with any required legal documentation to entered into

c) UU may take legal action to obtain a court order to instruct removal of the structure at the owners cost.

The key factors to be considered when selecting one of these options are:-

a) Security of supply

b) Health and safety

c) Cost benefit

d) Company reputation

e) Probability of Pipeline failure and likely consequences. These will vary with the Pipeline material, diameter, depth below foundation, ground conditions and the operating regime of the Pipeline

7.3 The notification given to the owner of the building shall state that, notwithstanding our Statutory Rights and those contained in any deed, UU shall not be liable for any costs whatsoever if damage is occasioned to the structure whilst carrying out our works.

7.4 In the case of structures of a temporary or easily removable character consent to such structures may after consideration be given by UU strictly on a case by case basis and the decision of UU being final. UU's access to any Easement Area or Easement Width should not be obstructed or impeded in any way

8 STOPPING UP ORDERS

8.1 UU has no objection to a Stopping up Order, provided that access remains for repair and maintenance of the network within the area affected.

8.2 If the proposed development will impede clear access, then the water main must be abandoned or diverted at the applicants cost.

8.3 Typically, there would be no objection if the water main remains within a Street to which there is vehicular access sufficient for UU to perform its statutory duties. It is not necessarily a problem if the Street is within a gated enclosure, e.g. alley gates are not a problem.

8.4 If the main does not remain within a Street, the developer must provide an easement according to UU standard conditions. Detailed information is available from the United Utilities Website

8.5 The following is specifically not permitted in relation to easements.

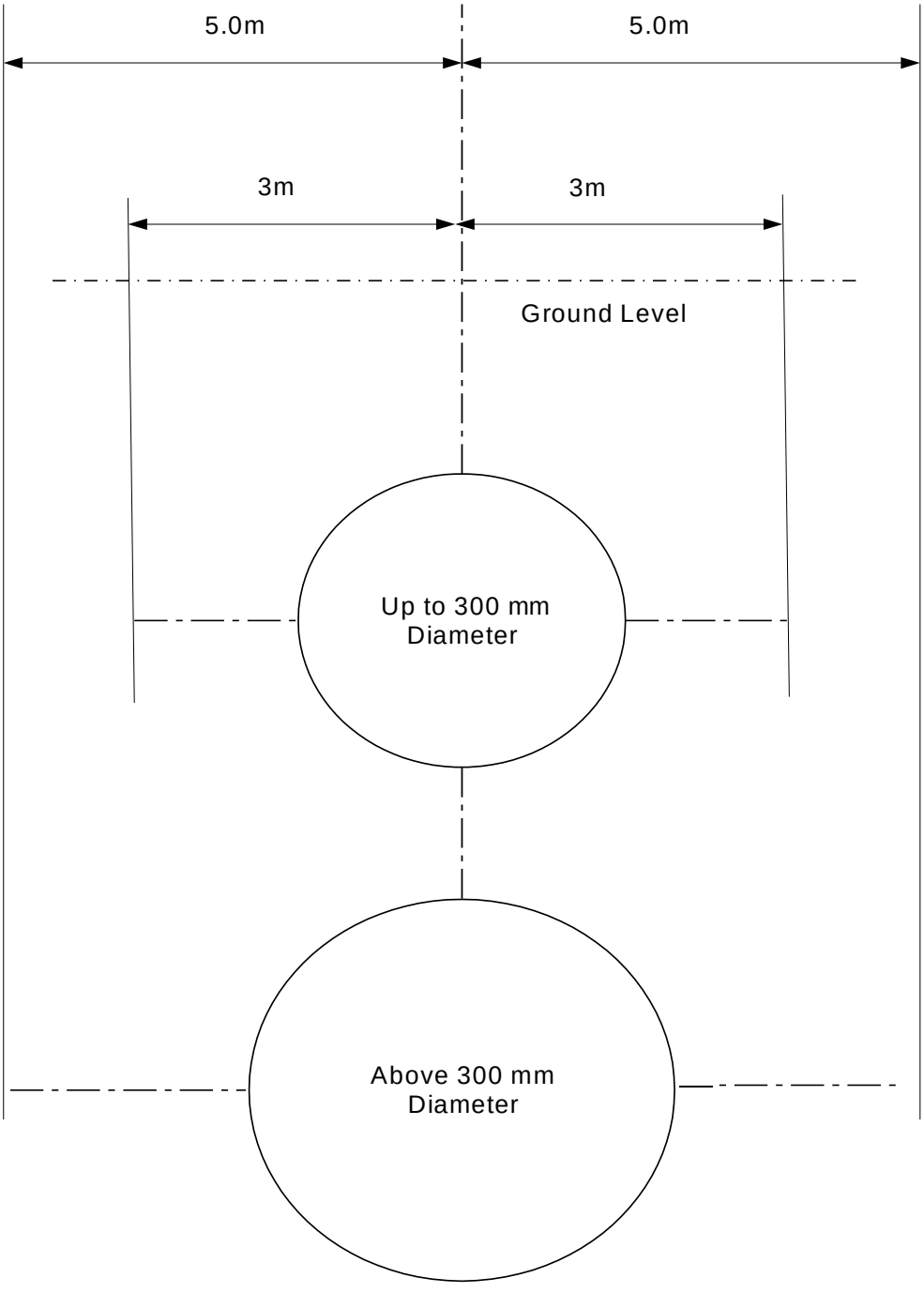
a) Any alteration to ground level which leaves the water main at a depth less than 900mm (750mm for PE pipes), or more than 1200mm.

b) Any building over the main, or within the Easement Area or Easement Width, such that an excavation of the main would threaten the stability of the building.

c) Planting of large trees (detailed information available in Appendix 1). This shows the distances that various trees and shrubs can be planted away from Pipelines and water mains. Root barriers can be used when planting closer to the mains; however trees root barriers need to be deep enough to stop roots from penetrating under the barrier.

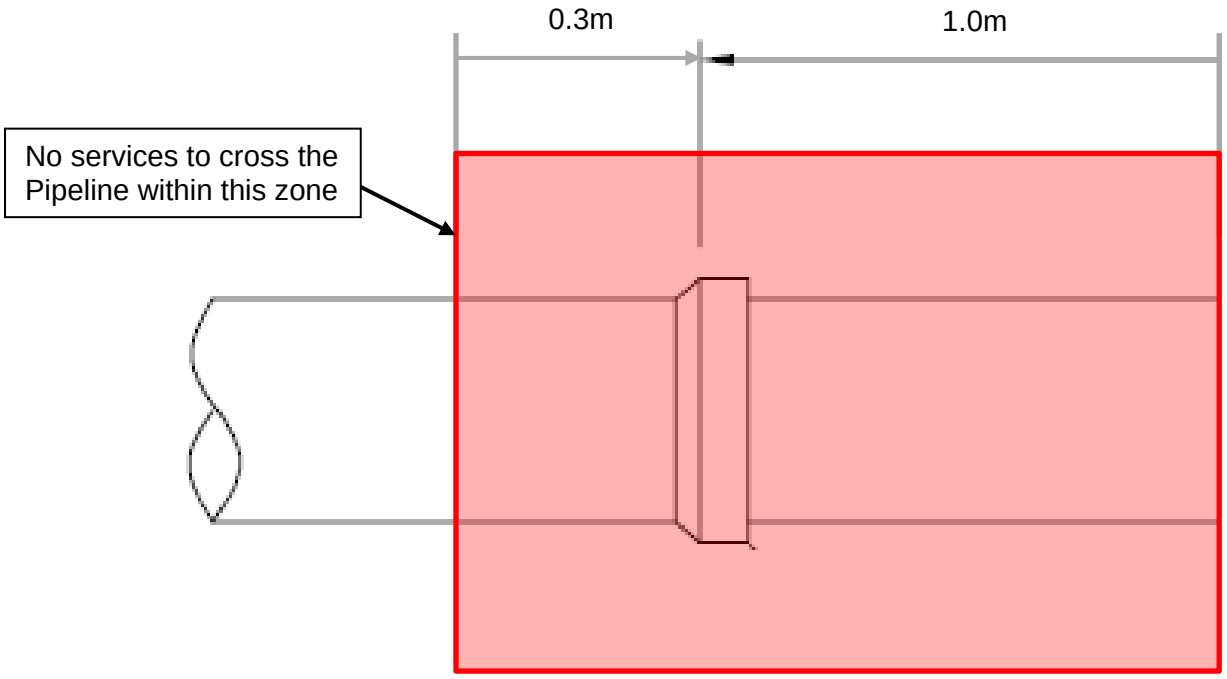
9 DRAWINGS

Figure 1: Easement Widths for Single Pipes



Note: This sketch is issued for guidance only (not to scale)

Figure 2: Service Crossing Restrictions in relation to Pipeline Sockets



APPENDIX 1: PLANTING NEAR TO PIPELINES

Latin Name	Common Name	Tree or shrub planting maintained as hedge (no higher than 1.5m height)	Individual trees planted from 3 metres of underground asset or pipe	Individual trees planted from 6 metres of underground asset or pipe	Group trees planted from 10 metres of underground asset or pipe
Acer campestre	Field Maple	Yes	Yes	Yes	Yes
Aesculus hippocastanum	Horse chestnut	✗	✗	✗	Yes
Carpinus betulus	Hornbeam	Yes	✗	✗	Yes
Castanea sativa	Sweet Chestnut	✗	✗	✗	Yes
Corylus avellana	Hazel	Yes	Yes	Yes	Yes
Crateagus monogyna	Hawthorn	Yes	Yes	Yes	Yes
Fagus sylvatica	Beech	Yes	✗	✗	Yes
Ilex aquifolium	Holly	Yes	Yes	Yes	Yes
Larix decidua	Larch	✗	✗	✗	Yes
Ligustrum vulgare	Privet	Yes	Yes	Yes	Yes
Malus domestica	Apple	✗	Yes	Yes	Yes
Malus sylvestris	Crab Apple	✗	Yes	Yes	Yes
Pinus nigra	Black pine	✗	✗	✗	Yes
Pinus sylvatica	Scots Pine	✗	✗	✗	Yes
Platanus acerifolia	London Plane	✗	✗	✗	Yes
Prunus avium	Wild Cherry	✗	Yes	Yes	Yes
Prunus cerasifera	Plum	✗	Yes	Yes	Yes
Prunus lusitanica	Laurel	Yes	Yes	Yes	Yes
Prunus padus	Bird Cherry	✗	Yes	Yes	Yes
Prunus spinosa	Blackthorn	Yes	Yes	Yes	Yes
Pyrus communis	Pear	✗	Yes	Yes	Yes

Latin Name	Common Name	Tree or shrub planting maintained as hedge (no higher than 1.5m height)	Individual trees planted from 3 metres of underground asset or pipe	Individual trees planted from 6 metres of underground asset or pipe	Group trees planted from 10 metres of underground asset or pipe
Sambucus nigra	**Elder**	**Yes**	**Yes**	**Yes**	**Yes**
Sorbus aria	**Whitebeam**	**✗**	**✗**	**✗**	**Yes**
Sorbus aucuparia	**Rowan**	**✗**	**✗**	**Yes**	**Yes**
Taxus baccata	**Yew**	**Yes**	**✗**	**✗**	**Yes**
Tilia cordata	**Lime**	**✗**	**✗**	**✗**	**Yes**
Ulmus glabra	**Wych Elm**	**✗**	**✗**	**Yes**	**Yes**

WATER EFFICIENCY IN NEW HOMES

Evidence to support adoption of the Building Regulations Optional Requirement for local authorities in North West England and the Midlands

Background

Water is essential for life - yet here in the UK (as in many regions across the world) the future availability of water is a concern. The area covered by Water Resources West is an area the Environment Agency has described as having 'moderate water stress'; water scarcity/stress occurs when demand is high compared to the water that is available[1] .

Population growth, climate change and environmental protection measures all put pressure on water resources and contribute to water stress in our region. On top of this, housing shortages mean that lots more housing is needed today and in the future. Hence, planning policy is a vital tool to help ensure long term sustainable management of water supplies, as well as helping protect our local rivers and wildlife. Achieving a balance between these conflicting demands is a challenge for us all.

Water Efficiency Standards for New Homes

The Code for Sustainable Homes was launched in 2006 to help reduce UK carbon emissions and create more sustainable homes; it was the national standard for use in the design and construction of new homes in the UK and is still referred to in older Local Plans. In 2015 it was withdrawn and some of its standards were consolidated into Building Regulations including the requirement for all new dwellings to achieve a water efficiency standard of 125 litres of water per person per day (l/p/d). In the same year, the Government updated Building Regulations Part G, introducing an 'optional' requirement of 110 l/p/day for new residential development, which should be implemented through local policy where there is a clear need based on evidence. (See Appendix 1).

In 2018, Welsh Government amended building regulations so that new builds are built to a standard of 110 l/p/d[2]. In England however the standard of 110 l/p/d needs to be adopted as a local policy by each planning authority in its local plan before it can take effect.

In 2020, the government published a White Paper on future planning[3] in England. The focus is on clear requirements and standard approaches. It clear that water will remain an important consideration and that "sustainable development" will be a key test.

The Need for Water Efficiency in New Homes

The Water Framework Directive (WFD) was adopted into UK Law in 2003. It was designed to change water management for the better by putting aquatic ecology at the heart of all management decisions. One of the most important features of the WFD is that it encourages public consultation, meaning everyone can have a say in what is needed to protect our water resources. It also takes into account the environmental, economic and social implications of any such investment/decisions.

Delivery of the WFD objectives in our region is set out in River Basin Management Plans for the Solway Tweed, North West, Dee, Severn and Humber River Basins. These documents highlight a number of issues that are affecting the achievement of the WFD objectives, one of these is the pressures from water supply. Thus, there are a variety of reasons why water efficiency is important for Local Authorities.

[1] Water stressed areas – final classification, Environment Agency and Natural Resources Wales, July 2013
[2] The Building (Amendment) (Wales) Regulations 2018
[3] Planning for the future, Ministry of Housing, Communities and Local Government, August 2020

Local Authorities have a duty of care for communities and the environment and the reduction in water use can help to minimise the quantity of water taken from the environment as well as helping to control customer bills. There are some important factors to consider in this regard:

- The general Duty to Co-operate[4] can also apply to water efficiency and, across the region, there are several examples of exemplar project partnerships between Local Authorities and water companies.
- The National Planning Policy Framework[5] Section 2 requires strategic policies to make sufficient provision for water supplies. Section 14 of the NPPF concerns "Meeting the challenge of climate change, flooding and coastal change" and paragraph 149 make specific reference to water supply within this context. Paragraph 170 goes on the set out that planning policies and decisions should contribute to and enhance the natural and local environment including water. For reference we have included specific government guidance in relation to the optional standard in Appendix 2.
- Local Authorities must "have regard to the River Basin Management Plans and any supplementary plans in exercising their functions" and this includes taking action on water efficiency.
- The production of mains water requires significant energy and chemical inputs and hence reducing demand for water can contribute significantly to reducing carbon emissions, especially where those savings are of hot water.

Why do we need to save water?

The areas covered by Water Resources West are classed as an area under 'water stress' by the Environment Agency (Table 1). While local planning authorities are encouraged to draw on this existing evidence to establish the need for possible action government makes clear that this should not be the only consideration[6] – not least because current maps were not developed to establish areas where additional controls were required on new homes. A requirement for a higher water efficiency standard within a local plan should also follow on from consultation with the local water supplier and the Environment Agency. Additional reasons for the local need for action highlighted by the Environment Agency and the local water suppliers are set out below.

Table 1. Water Stress Classification for current and future scenarios[1] (L=low stress; M=moderate stress; S=serious stress). The four scenarios represent the range of pressures on water resources from climate change and future demands.

Water company area	Current Stress	Future Scenario 1	Future Scenario 2	Future Scenario 3	Future Scenario 4
Dwr Cymru Welsh Water	M	M	M	M	M
Severn Trent	M	M	M	M	M
South Staffs Water	M	M	M	M	M
United Utilities	M	M	M	M	M

[4] Section 110 of the Localism Act sets out the 'Duty to Co-operate'. It requires cooperation between local planning authorities and other public bodies to maximise the effectiveness of policies for strategic matters in Local Plans. Even if the formal duty is removed in future legislation, the August 2020 White Paper[3] makes it clear that strategic, cross-boundary issues should still be considered in the context of sustainable development.

[5] National Planning Policy Framework, Ministry of Housing, Communities & Local Government, February 2019

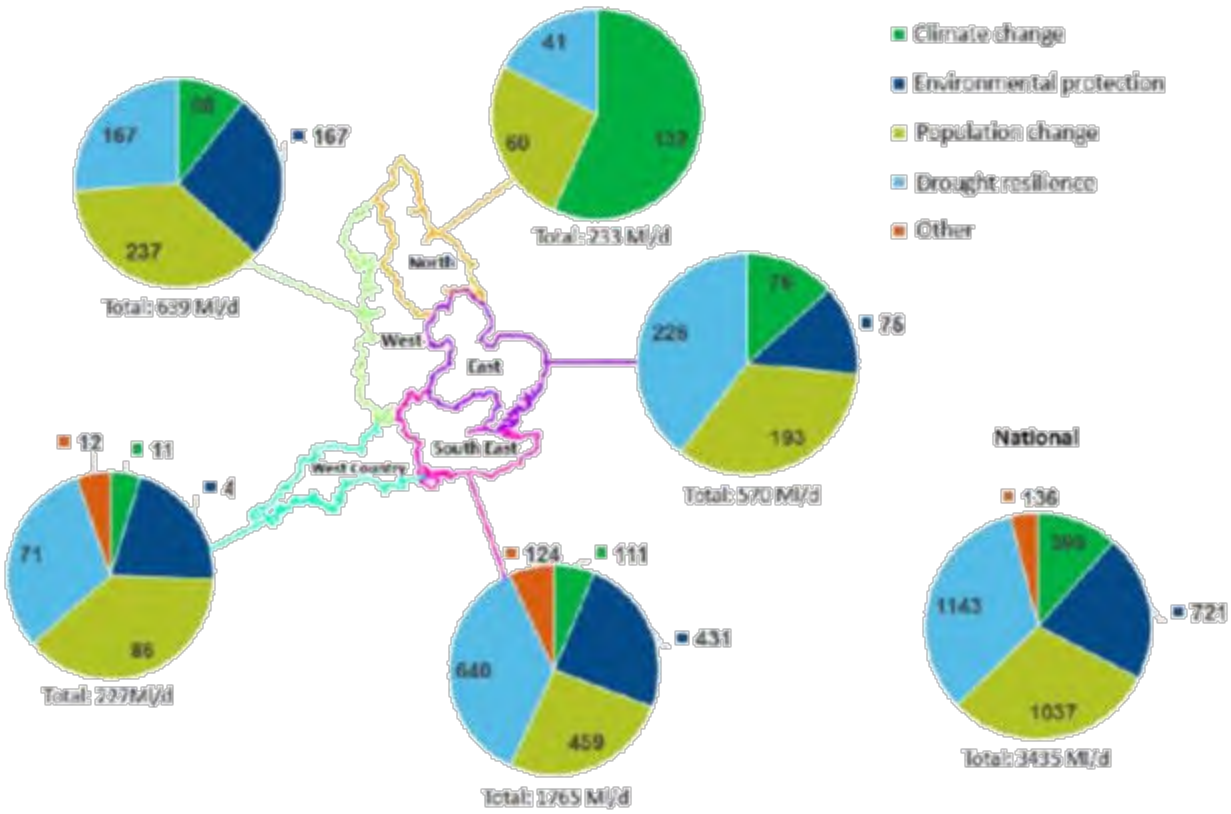
[6] Housing Standards Review Consultation, Department for Communities and Local Government, August 2013

In March 2020, the Environment Agency published the National Framework for Water Resources[7]. This identifies strategic water needs for England and its regions across all sectors up to and beyond 2050. The National Framework identifies that our region faces the second highest pressures on Water Resources. Significantly, the National Framework identifies that increased consumption, driven by population increases, is the largest driver of additional water need in the region. Increased public water supply drought resilience, increased protection for the environment and the impact of climate change reducing water availability of existing supplies also have impacts on water availability (Figure 1).

Based on the best available evidence the National Framework adopted a planning assumption of reducing *average* per capita consumption (PCC) to 110 l/p/d by 2050 nationally. Water Resources West's projections are broadly consistent with that, with average per capita consumption reducing to 111 l/p/d by 2050[8]. These projections are based on forecasts made for the water companies' 2019 WRMPs.

Even with these reductions in consumption, parts of our region will need new water resources to be developed[8]. If the planned reductions are not achieved then more significant and more costly water resources will need to be developed. It is therefore important the measures are taken across the region to support the achievement of the lower per capita consumption.

Figure 1. Extract from the National Framework[7] showing how population growth results in Water Resources West having the second highest pressure on water resources in England. Numbers in the pie charts show the additional water needed by 2050 due to different drivers (in Ml/d).



[7] Meeting our future water needs: a national framework for water resources, Environment Agency, March 2020

[8] Initial Resource Position, Water Resources West, March 2020

Public concern also highlights the need to support water saving. Surveys[9] of water users in North West England and the Midlands have shown that, while there is little general awareness of the issues, once informed 70% are concerned about water scarcity. In addition to running out of water, customers are worried about the potential impact on water bills, restrictions and wastage

Water Framework Directive requirements are set out in River Basin Management Plans. Water efficiency measures have a direct effect in reducing the abstraction from water bodies assessed in those plans. Abstraction in turn affects the hydrological regime of those water bodies. River Basin Management Plans for the Solway Tweed, North West, Dee, Severn and Humber River Basins identify that there are waterbodies within all those areas for which the hydrological regime does not support good status. In turn the hydrological regime can affect water quality, species and habitats.

Changes to the natural flow and level of water is identified as a significant water management issue. Reduced flow and water levels in rivers and groundwater caused by human activity (such as abstraction) can mean that there is not enough water for people to use and wildlife might not be able to survive. Reduced flow affects the health of fish and exaggerates the impacts of barriers such as weirs.

Table 2. WFD classification of waterbodies in 2015 River Basin Management Plans

River Basin District	Percentage of surface water bodies not achieving good ecological status or potential	Percentage of groundwater bodies not achieved good quantitative status
Solway Tweed[10]	54% (305 out of 560)	28% (18 out of 64)
North West[11]	78% (480 out of 613)	11% (2 out of 18)
Humber[12]	86% (839 out of 987)	25% (13 out of 51)
Severn[13]	80% (604 out of 755)	21% (9 out of 42)
Dee[14]	73% (68 out of 93)	0% (0 out of 5)

Summary of evidence on the need for the optional water efficiency standard

As we have seen above, there is a range of evidence on the water stress across the North West and the Midlands. This means there is a clear need for the 110 l/p/d water efficiency standard.

For inclusion in a local plan a local planning authority must be able to demonstrate at examination of the plan that the standard is required to address a clear need and as part of an approach to water efficiency that is consistent with a wider approach to water efficiency as set out in the local water undertaker's water resources management plan. We recommend that the following evidence is cited:

- The classification of moderate water stress for the water supplier in your area (Table 1)[1].
- The National Framework for water resources noting that Water Resources West faces the second highest pressures on water resources in England due largely to population growth[7].
- The National Framework for water resources planning assumption of 110 l/p/d[7].
- The consistency between these planned reductions in consumption between the National Framework, Water Resources West's plans and your water supplier's WRMP[8].

[9] Customer Survey for Severn Trent, Thames Water and United Utilities, Verve, July 2018
[10] River basin management plan for the Solway Tweed river basin district: 2015 update, Environment Agency and Natural Scotland, 21 December 2015
[11] River basin management plan, Part 1: North West river basin district, Environment Agency, December 2015
[12] River basin management plan, Part 1: Humber river basin district, Environment Agency, December 2015
[13] River basin management plan, Part 1: Severn river basin district, Environment Agency, December
[14] Dee River Basin Management Plan 2015 – 2021, Proposed Summary, Natural Resources Wales and Environment Agency, October 2015

- High levels of public concern (70%) in the region, when informed about issues of water scarcity[9].
- Reference to the WFD ecological status of water bodies in your River Basin District, with changes to flow and level recognised as a significant water management issue in the River Basin Management Plan (Table 2).

Water Companies

A consequence of the population and housing growth in our region has meant that water companies have been asked to accommodate the new growth, yet at the same time their abstraction licenses are being reduced. Therefore it is vital that water companies support and are supported in initiatives to help get 110 l/p/d in planning policies across local authorities in the region, to help meet their requirement to supply their customers. The water companies in Water Resources West are Dwr Cymru Welsh Water, Severn Trent, South Staffs and United Utilities.

In preparing your local plan you should consult with your local water supply company on specific local issues.

New Homes

The scale of new development that is needed across our region is immense - the Government aiming for delivery of 300,000 new homes a year across England[15]. Within Water Resources West's region we estimate that there will be 1.6 million new properties by 2050. Yet at the same time there is need to share the already scarce water resources - therefore the need for implementing at least 110 l/p/d into local plans and policies is apparent.

Impact on viability

The cost of installing water-efficient fittings to target a per capita consumption of 110l/d has been estimated as a one-off cost of £9 for a four bedroom house[16]. Research undertaken for the Welsh Government indicated potential annual savings on water and energy bills for householders of £24 per year as a result of such water efficiency measures[17].

The Consumer Council for Water notes that the discretionary, tighter (building) standard of 110 l/p/d is something that should be pursued, also bearing in mind that saving water is not the only a driver of water efficiency[18]. This is because water efficiency could also have a positive effect on reducing energy bills, water bills of metered customers and carbon emissions.

The Greater London Authority carried out a survey of developers to test the viability of the 110 l/p/d standard. The results of this survey[19] made it clear that those associated with the development industry did not consider that the proposed changes would have any impact on building.

Viability is also evidenced by the examples from other local authorities who have adopted the standard. South Worcestershire adopted the 110 l/p/d standard in its February 2016 local plan. The standard remains the preferred option for next local plan. See the case study below. Bromsgrove and Redditch councils cooperated to require the 110 l/p/d standard for certain developments in their plans which were adopted in January 2017. Another example is Nottingham City Council who adopted the 110 l/p/d standard for all new dwellings in January 2020.

[15] Planning for the Future, Ministry of Housing, Communities and Local Government, March 2020
[16] Housing Standards Review Cost Impacts, Department for Communities and Local Government, September 2014
[17] Advice on water efficient new homes for England, Waterwise, September 2018
[18] Response to Defra consultation on measures to reduce personal water use, Consumer Council for Water, October 2019
[19] Greater London Authority Housing Standards Review: Evidence Of Need, David Lock Associates, May 2015

Water efficiency is therefore not only viable but of positive economic benefit to both private homeowners and tenants.

Water Calculator

The Water Calculator was developed to help provide a working example of the calculator used for part G of the building regulations. It uses the method set out in the 'Water Efficiency Calculator for New Dwellings'[20] . The Water Calculator contains information on water consumption for hundreds of products, enabling quick and easy specification, without the hassle of gathering data from several product manufacturers. To access the water calculator visit: www.thewatercalculator.org.uk

Case study

South Worcestershire's current local plan was adopted, following examination, in February 2016[21]. It is a major sub-regional land use plan, prepared jointly by the three South Worcestershire Councils; Malvern Hills, Worcester City and Wychavon working together. Within the local plan, policy SWDP30c states that "for housing proposals, it must be demonstrated that the daily non-recycled water use per person will not exceed 110 l/p/d". The reasoned justification for this policy highlights the following factors:

- This policy is central to the council's response to the Framework, which advocates that local plans incorporate strategies to mitigate and adapt to climate change, in line with the objectives and provisions of the Climate Change Act 2008 over the longer term. This includes factors such as flood risk, water supply and changes to biodiversity.
- Without effective local planning and risk management, the consequences of climate change may also have a significant detrimental impact on budgets and service delivery. It may also compromise the Government's ability to meet the statutory requirements under the Climate Change Act 2008.
- Local planning authorities have a general responsibility not to compromise the achievement of United Kingdom compliance with the Water Framework Directive (WFD(68)) (Directive 2000/60/EC). More specifically, the local plan has to take into account the River Severn Basin Management Plan, which in itself is a requirement of the WFD. All surface water bodies need to achieve "good ecological status" by 2015.
- The Localism Act 2011 enables the UK government to require local authorities to pay if their inaction results in a failure to meet WFD requirements.
- The Localism Act 2011 also requires local planning authorities to co-operate on strategic cross-boundary matters, for example the provision of water supply infrastructure, water quality, water supply and enhancement of the natural environment. Consequently, there is a need for developers to engage positively with the local water supplier to ensure that all the necessary infrastructure is secured, so as to ensure that there is no deterioration in the quality or quantity of water of the receiving water body(ies) and to avoid delays in the delivery of development.
- The 2006 Natural Environment and Rural Communities (NERC) Act imposes a duty on local planning authorities to have regard to conserving biodiversity in carrying out all of their functions.
- The South Worcestershire Water Cycle Study looks at the level of planned growth and the ability of the infrastructure (i.e. water supply and waste water treatment) to accommodate it without adversely affecting the natural water cycle. It identifies an overall shortage in future water supplies that necessitates the delivery of minimum water efficiency targets.
- The effective management of water is considered critical in the pursuit of sustainable development and communities. It reduces the impact flooding can have on the community, maintains water quality and quantity and helps to enhance local amenity / property value and biodiversity through the provision of Green Infrastructure. Effective water management also reduces the movement of water and sewage, thereby reducing energy requirements. Development proposals incorporating grey

[20] Appendix A of Approved Document G, The Building Regulations 2010, HM Government 2015 edition with 2016 amendments

[21] South Worcestershire Development Plan, Adopted, February 2016.

water recycling will therefore be supported and opportunities for the retrofitting of water efficiency measures will be encouraged.

The South Worcestershire Councils are currently preparing the next local plan. Following consultation its Preferred Options report[22] was published in November 2019. In relation to water efficiency the preferred option is to require new dwellings to meet the tighter Building Regulations optional requirement of 110 l/p/d as per the adopted policy.

Recommendations

There is firm evidence in across the North West and the Midlands that clearly justifies the need for more stringent water efficiency targets for new residential development. Local Authorities should consider all the factors in their local plans and we strongly recommend they adopt 110 l/p/d for water efficiency using the suggested wording below:

> **All new residential development must achieve as a minimum the optional requirement set through Building Regulations for water efficiency that requires an estimated water use of no more than 110 litres per person per day.**

Past experience has shown that successful adoption of 110l/p/d in local plans requires the following:

1. Significant engagement and consultation is required in developing local plans, including engagement with key stakeholders and public sector partners, responsible for delivering a range of services and infrastructure.
2. Recommend local plans are subject to public consultations (many people are concerned about water) and that where appropriate, comments from the public help shape the contents of this plan and helps with public buy-in.
3. Local plans should actively encourage the design of new buildings that minimise the need for energy and water consumption, use renewable energy sources, provide for sustainable drainage, support water re-use and incorporate facilities to recycling of waste and resources.
4. Local plans should have a positive approach to the adaptation of climate change –
    - by avoiding development in areas at greatest risk of flooding, and
    - promoting sustainable drainage, and
    - challenging water efficiency standards.

[22] South Worcestershire Development Plan Review, Preferred Options Consultation, November 2019.

Appendix 1. Extract from Part G of the Building Regulations

Extract from Part G of Building Regulations

Optional requirement

2.8 The optional requirement only applies where a condition that the dwelling should meet the optional requirement is imposed as part of the process of granting planning permission. Where it applies, the estimated consumption of wholesome water calculated in accordance with the methodology in the water efficiency calculator, should not exceed 110 litres/person/day.

2.9 The person carrying out the work must inform the ***BCB*** where the optional requirement applies.

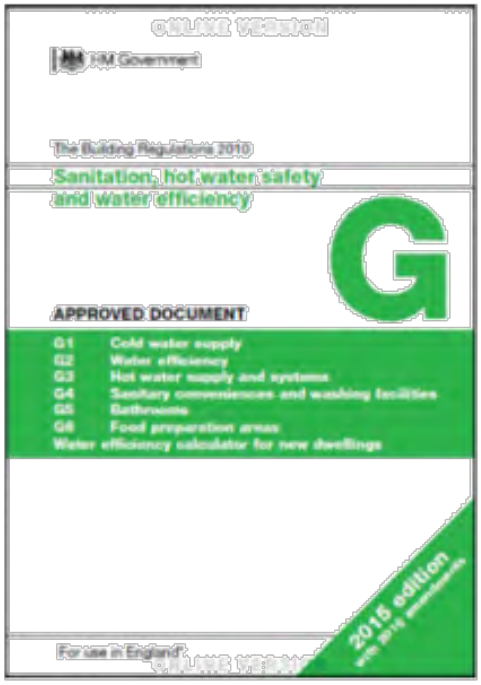
2.10 As an alternative to calculating the water consumption (as paragraph 2.8), a fittings approach that is based on the water efficiency calculator methodology may be used.

2.11 Where the fittings approach is used, the water consumption of the fittings provided must not exceed the values in Table 2.2. If they do, the water efficiency calculator must be completed to demonstrate compliance. Similarly, where a shower is not to be provided or where a waste disposal unit, a water softener or water re-use is to be provided the water efficiency calculator must be completed.

2.12 Where the fittings approach is used, the notice given under regulation 37 should state "Less than 110 litres/person/day using fittings approach".

Table 2.2 Maximum fittings consumption optional requirement level

Water fitting	Maximum consumption
WC	4/2.6 litres dual flush
Shower	8 l/min
Bath	170 litres
Basin taps	5 l/min
Sink taps	6 l/min
Dishwasher	1.25 l/place setting
Washing machine	8.17 l/kilogram



Appendix 2 NPPF Planning Practice Guidance
Housing: optional technical standards, Water efficiency standards[23]

Can local planning authorities require a tighter water efficiency standard in new dwellings?
In setting out how the planning system should contribute to the achievement of sustainable development, the National Planning Policy Framework and guidance makes clear this includes planning to provide the high quality housing required to meet the needs of present and future generations, and helping to use natural resources prudently. The Framework's policies expect local planning authorities to adopt proactive strategies to adapt to climate change that take full account of water supply and demand considerations. Early engagement between local planning authorities and water companies can help ensure the necessary water infrastructure is put in place to support new development. See water supply guidance. The local planning authority may also consider whether a tighter water efficiency requirement for new homes is justified to help manage demand.
Paragraph: 013 Reference ID: 56-013-20150327

Revision date: 27 03 2015

What standard should be applied to new homes?
All new homes already have to meet the mandatory national standard set out in the Building Regulations (of 125 litres/person/day). Where there is a clear local need, local planning authorities can set out Local Plan policies requiring new dwellings to meet the tighter Building Regulations optional requirement of 110 litres/person/day.
Paragraph: 014 Reference ID: 56-014-20150327

Revision date: 27 03 2015

How should local planning authorities establish a clear need?
It will be for a local planning authority to establish a clear need based on:

- existing sources of evidence.
- consultations with the local water and sewerage company, the Environment Agency and catchment partnerships. See paragraph 003 of the water supply guidance
- consideration of the impact on viability and housing supply of such a requirement.

Paragraph: 015 Reference ID: 56-015-20150327

Revision date: 27 03 2015

What are the existing sources of evidence?

Primary sources of evidence which might support a tighter water efficiency standard for new dwellings are:

- The Environment Agency Water Stressed Areas Classification (2013) which identifies areas of serious water stress where household demand for water is (or is likely to be) a high proportion of the current effective rainfall available to meet that demand.
- Water resource management plans produced by water companies.
- River Basin Management Plans which describe the river basin district and the pressure that the water environment faces. These include information on where water resources are contributing to a water body

[23] https://www.gov.uk/guidance/housing-optional-technical-standards#water-efficiency-standards

being classified as 'at risk' or 'probably at risk' of failing to achieve good ecological status, due to low flows or reduced water availability.

In addition to these primary data sources, locally specific evidence may also be available, for example collaborative 'water cycle studies' may have been carried out in areas of high growth.

Paragraph: 016 Reference ID: 56-016-20150327

Revision date: 27 03 2015

Where can I find out more about the water efficiency standard?
See further information on the water efficiency standard.

Paragraph: 017 Reference ID: 56-017-20150327

Revision date: 27 03 2015

Date: 24 August 2022
Our ref: 400497

Customer Services
[redacted]

Rossendale Borough Council

BY EMAIL ONLY

Dear Sir/Madam

Planning consultation: Rossendale Local Plan - Climate Change Supplementary Planning Document (SPD) Consultation

Thank you for your consultation on the above dated and received by Natural England 13 July 2022.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Natural England welcome this opportunity to comment on the Rossendale Local Plan Climate Change SPD and our comments are provided below.

Natural England acknowledge reference within the SPD regarding carbon storage, but we are concerned at the lack of reference to peat deposits within the borough's boundaries.

England's peatlands are our largest terrestrial carbon store and are vital for capturing and storing carbon. They provide a range of other valuable benefits including biodiversity-rich ecosystems; improved water quality and natural flood management; the protection of historic environment features; and connecting people with nature.

The England Peat Action Plan was published by Defra in May 2021. It contains the following ambition:

We want our peatland to meet the needs of wildlife, people, and the planet. All uses of peatland should keep the peat wet and in the ground. We will work to ensure all our peatlands, not just deep or protected peat, are responsibly managed, or, in good hydrological condition or under restoration management.

Following the publication of the England Peat Action Plan and the results of a number of peat pilot projects, Natural England have a better understanding of the impact of carbon loss from damaged and unmanaged peat, as well as the opportunity costs of not restoring peat as a functioning ecosystem. We would like to see greater consideration given to the importance of the borough's peat deposits in relation to carbon storage within the SPD, and we would welcome further discussions with Rossendale Borough Council in this regard.

If you have any queries relating to the advice in this letter please contact me at nicholas.armstrong@naturalengland.org.uk.

Yours sincerely

Nicholas Armstrong
Planning Adviser - Cheshire to Lancashire Area Team

Lancashire County Council

[redacted]

Anne Storaah
Planning Policy Manager
Rossendale Borough Council

Date: 24 August 2022

[redacted]

Dear Anne,

Climate Change SPD Consultation

Thank you for consulting Lancashire County Council on the above supplementary planning document and I hope the response set out below is of assistance to you in its preparation.

The County Council is the Lead Local Flood Authority (LLFA) for the County Council's administrative area. The Flood and Water Management Act (FWMA) sets out the requirement for the LLFA to manage 'local' flood risk (flooding from surface water, groundwater, and ordinary watercourses) within their area.

Section 3 - Reducing the dominance of fossil-fuelled vehicles via encouraging sustainable and more active transport

The above section aims to provide guidance on how sustainable, active transport can be encouraged throughout the borough. The Lead Local Flood Authority wish to note that sustainable drainage systems (SuDS) can provide a vital role in creating attractive, high-quality blue-green infrastructure, that in turn encourages more active transport. The SPD should be clear that SuDS can and should be included, contributing to the green infrastructure of an active transport network. For example, https://www.susdrain.org/case-studies/case_studies/bridget_joyce_square_london.html

Above-ground SuDS components such as swales can and should easily be included as part of the active transport network due to their linear nature. The Ciria Publication Improving the performance of linear assets through green infrastructure. Main guide (phase 2) (C772F) provides a useful guide.

SuDS can be used in the highway as traffic calming measures and in low-traffic neighbourhoods, for example, rain gardens fed by dropped curbs and SuDS trees, delivering more attractive green spaces that encourage active transport. This link could be strengthened in the SPD. An interesting case study of SuDS incorporated into traffic calming measures is available at https://www.susdrain.org/case-

studies/pdfs/alma_road_rain_gardens_london.pdf. This can be linked to the reference to modal filters and LTNs on page 10 of the SPD.

Section 5 – Water Interventions

The Lead Local Flood Authority generally support the above section but advises that more robust links to the relevant local plan policies and SuDS Pro-forma are made. The SuDS Pro-forma provides a template that can be adapted by the Local Planning Authority to ensure the evidence required to meet local planning policy ENV9 is submitted by applicants. As it stands, it is unclear from the SPD how a developer is expected to meet some requirements of policy ENV9.

- Bullet point 3, page 18 - It would be useful to link this point to the relevant flood risk maps in the footnotes. (https://check-long-term-flood-risk.service.gov.uk/map and https://flood-map-for-planning.service.gov.uk/). This bullet also contains a typo "Lead Local Flood Risk Authority", this should be "Lead Local Flood Authority".
- Bullet point 4, page 18 - The SuDS Pro-forma sets out the evidence required to meet the hierarchy of drainage options set out in policy ENV9. A link should be made here.
- Bullet point 5, page 18 – "In early design phases, applicants will have to incorporate sustainable drainage systems and consider surface water management". What does this look like for Rossendale? 'Early design phases' makes it appear that SuDS are not expected at detailed design, this would be contrary to the NPPF. The Lead Local Flood Authority expect sites to be designed with a "drainage first" approach as per the SuDS Manual (C753), do Rossendale Borough Council also expect this to be followed?

  Does this mean that natural and existing artificial drainage features of sites must be identified and mapped so that they can be protected and integrated with the SuDS and wider blue-green infrastructure and integrated water management on the site to help reduce the causes and impacts of flooding in line with the National Planning Policy Framework? This can also help meet other environmental targets such as Biodiversity Net Gain. Natural features can be considered to include:

  - areas at risk of flooding (from any source)
  - catchments;
  - ephemeral or perennial watercourses, including existing ditches;
  - overland flow routes;
  - floodplains;
  - wetlands;
  - permeable areas (e.g. sands and gravels);
  - zones of high water table;
  - natural depressions;
  - steep slopes;
  - areas of peat.

The Lead Local Flood Authority advise site layouts should be designed around these features to ensure they are protected.

- Paragraph 1, page 19 – "New developments shall incorporate appropriate Sustainable Drainage Systems (SuDs) in accordance with National Standards for Sustainable Drainage Systems". We advise this is expanded to the following – "Policies, guidance and standards for managing surface water flood risk and the design of SuDS, or any future replacements of the following, must be complied with when designing for and managing surface water:
    - SuDS Pro-Forma and associated guidance
    - National Planning Policy Framework
    - Planning Practice Guidance
    - The SuDS Manual (C753)
    - Defra Technical Standards for Sustainable Drainage Systems
    - The Lead Local Flood Authorities Planning Advice"
- Buller point 2, page 19 – Our surface water planning advice is expected to be included as part of our planning advice service, so this can be simplified to "All applicants are advised to access the Lead Local Flood Authorities Planning Advice Service for technical advice on surface water and SuDS."
- Bullet point 2, page 20 – "Development… should not increase risk elsewhere". How would you like this to be achieved in Rossendale? Does this mean avoiding any development in areas at risk of surface water flooding or providing compensatory surface water flood storage, or another strategy? The Lead Local Flood Authority advise that any development in areas at risk of surface water flooding should provide a robust assessment of the impact of displacement of the flood risk and provide compensatory storage and/or other measures to manage the risk, as well as property-level measures e.g. raising FFLs
- Paragraph 1, page 21

  How does Rossendale Borough Council expect SuDS to be designed to manage the pollution risks from urban runoff? Does this mean all SuDS should provide an appropriate treatment train, as per the SuDS Manual (C753) and SuDS Pro-forma to ensure no detriment to water quality?

  SuDS can contribute to 'environmental enhancement and place making' through biodiversity net gain. If Rossendale Borough Council sees this as an opportunity for on-site BNG, a link should be made here.

  This paragraph also states that "the multi-functionality and multiple benefits of SuDS must always be considered". What does this mean, and what does it look like in Rossendale? Are all SuDS expected to provide amenity, biodiversity, water quality and water quantity benefits? The Susdrain website contains some case studies that may be useful here.

  Furthermore, what does Rossendale Borough Council consider as the "exceptional circumstances" where alternatives to multi-functional SuDS will be permitted? The Lead Local Flood Authority expect sites should be designed with a "drainage first" approach as per the SuDS Manual (C753), do Rossendale Borough Council also

expect this to be followed (as per bullet 5, pg 18)? If so, the 'exceptional circumstances' may be limited, for example, to highly contaminated sites where surface water must be contained in sealed units to avoid contamination?

- Paragraph 2, page 21 – Under paragraph 169 of the NPPF, the Lead Local Flood Authorities advice (available via our Planning Advice Service) should be taken into account when designing SuDS. https://www.lancashire.gov.uk/business/business-services/pre-planning-application-advice-service/pre-planning-application-flood-risk-and-land-drainage-advice-service/

Policy ENV6 states "On greenfield sites, applicants will be expected to demonstrate that the current natural discharge solution from a site is at least mimicked. On previously developed land, applicants will also be expected to follow the surface water hierarchy and any proposal based on a proposed reduction in surface water discharge from a previously developed site will be expected to target a reduction to a greenfield rate of run-off." It would be useful to expand on this in the SPD. What is a 'natural discharge solution' in Rossendale? If applying the SuDS Pro-forma, are previously developed sites defined in drainage terms as where the existing drainage system is reused in its entirety?

General comment – The Flood Hub would be a useful resource to link/reference. The Flood Hub is specific to the northwest, including local case studies etc. and is supported by the Lancashire Flood and Coastal Erosion Risk Management Partnership https://thefloodhub.co.uk.

Section 6 – Biodiversity and Green Infrastructure

Stronger links to SuDS and water management should be made throughout this section.

Green-blue infrastructure (GBI) should be considered, rather than just green infrastructure, considering how SuDS and the management of surface water and ordinary watercourses in a development site can contribute to high-quality GBI. The Lead Local Flood Authority expects all SuDS proposals to be designed to maximise the habitats available and biodiversity of the development site, working with existing habitats, watercourses and natural drainage features. This can help meet future statutory targets, such as providing biodiversity net gain. Mandatory biodiversity net gain as set out in the Environment Act (2021) will apply in England and is likely to become law in 2023. This will require a minimum of 10% biodiversity net gain on pre-development conditions. Biodiversity Net Gain may also already be a requirement for Rossendale Borough Council.

- Bullet 3, page 26 - The Lead Local Flood Authority expect no development to occur within 8 m of any ordinary watercourse (culverted or open), including the construction of structures such as walls and fences and expects the culverting of watercourses to be avoided. This is to ensure access for maintenance and to reduce the residual risk to adjacent properties. This buffer also provides significant opportunities for habitat creation, amenity, the enhancement of blue-green corridors, and water quality improvements. This can be linked to the bullet point below concerning clough woodland, as this presents an opportunity for the expansion of such woodlands. How does the Council expect this 8 m buffer to be utilised in Rossendale?

Appendix D – SuDS Pro-forma

- The SuDS Pro-forma template included in the SPD should be updated to meet Rossendale's local requirements, for example, the requirement for multifunctional SuDS.
- It is advised to include the SuDS Pro-forma and SuDS Pro-forma guidance as separate 'appendix' downloads on your website, as these contain technical information that will require updating should national policies, standards or guidance change. How will this be managed if the Pro-forma is included within the main SPD?
- The Lead Local Flood Authority strongly advise the Local Planning Authority to adopt the SuDS Pro-forma into the planning validation checklist.

Further guidance from the Lead Local Flood Authority with regards to surface water management and SuDS in Lancashire is available through our Surface Water Planning Advice document. A copy of this will be made available to the Local Planning Authority separately to this response.

Once again the County Council would like to thank you for the opportunity to respond to the latest consultation and the continued cooperation received.

Yours sincerely,

Marcus Hudson

Planning Service Manager

MAN.0299_LO23_PL_MAN_KW_GL

24th August 2022

Forward Planning Team
Rossendale Borough Council
The Business Centre
Futures Park
Bacup
OL13 0BB

Sent by email

Dear Sir/ Madam,

Rossendale Draft Climate Change SPD
Representations by Taylor Wimpey

We have been instructed on behalf of our client, Taylor Wimpey, to submit representations to the current consultation on the draft Climate Change SPD, in respect of their land interests within Rossendale.

Introduction

These interests include parcels within the recent Local Plan allocations at 'Land West of Market Street, Edenfield' (Ref: H66) where an application is due to be submitted imminently; and 'Grane Village' (Ref: H68) where an application was recommended for approval at planning committee in November 2021.

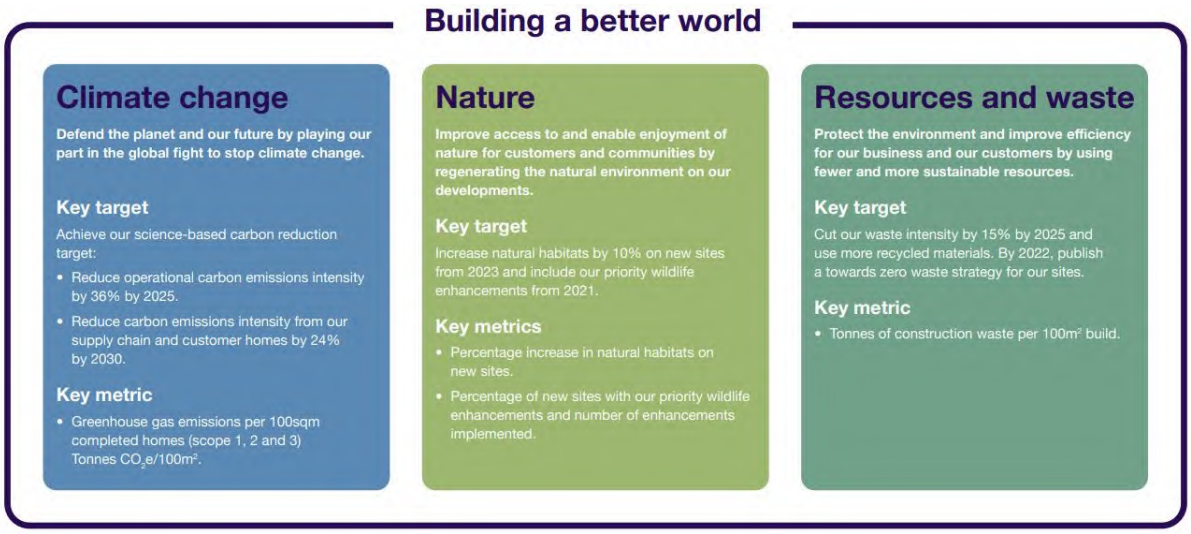
At the outset, we welcome the Council's proactive stance in declaring a Climate Emergency in 2019 and in seeking ways to address this through the planning policy regime. Indeed, Taylor Wimpey fully recognise the scale of the environmental crisis and are committed to being part of the solution, publishing a new ambitious Environment Strategy in 2021 (attached at **Enclosure 1**), which confirms:

> *"We will cut our own environmental footprint, reducing emissions and waste, conserving precious resources and regenerating the natural environment on our developments. Our ambitious science-based carbon reduction target will ensure we align our progress with the international Paris Climate Agreement.*
>
> *We will engage our supply chain, influencing positive change beyond our business and reducing the significant environmental impacts associated with the goods and services we buy.*

[redacted]

We know that people today want to live more sustainably but that this isn't always easy to do. Through the changes we make to our homes and developments, we will enable our customers to achieve their aspiration of a greener and healthier lifestyle."

This is then broken down to the following targets across three key areas:



Accordingly we fully support the Council's overall aims for new development to mitigate emissions, be adaptable for the impacts of climate change, and support communities; and our comments below should be seen in this light.

Comments on Draft SPD

In overall terms we support the document, which generally provides supplementary guidance and information that directly cascades from the adopted plan policies, exactly as an SPD should; however, in certain instances it makes prescriptive requirements over and above current adopted policy requirements, including:

- Seeking 10% on site renewables on all schemes above 10 dwellings (in section 4, energy efficiency); and
- Requiring minimum of equivalent of Code for Sustainable Homes level 4/ a 19% improvement on the Dwelling Emission Rate over the Target Emission Rate as defined in Part L1A of the Building Regulations (in Appendix C - Checklist for Climate Change Statement.

Our concern with these additional prescriptive requirements is that they have not been formally tested through the Sustainability Appraisal process or an independent examination, as the Local Plan has, and therefore their implications on site viability and deliverability have simply not been considered.

It is also pertinent that some of the requirements mentioned (including Code Level 4 and the 19% improvement on the Dwelling Emission Rate), overlap with, and have or will be superseded by changes to Building Regs, some of which came into effect in June 2022 with further changes expected to follow in 2025.

Since the publication of the Housing Technical Standards in March 2015, the government have sought to take a more standardised approach to increasing energy performance standards by enshrining these within the Building Regulations regime, as opposed to a patchwork of different local plan policies; with the introduction of any local optional standards above Building Regs now needing to be justified with robust evidence on need and viability (which has not been provided in support of this SPD).

Accordingly, it is our view that the Building Regulations regime remains the most appropriate mechanism to address sustainable construction and energy standards, and that additional prescriptive local requirements could generate confusion. What's more in some cases the emerging Building Regs requirements actually exceed the additional measures proposed anyway (such as 2021 Part L which already exceeds Code Level 4).

Beyond that we welcome the guidance provided in Appendix C on the requirements for Climate Change Statement's going forward, but would ask that the Council clarify whether this will become an application validation requirement upon adoption of the SPD, as it is not listed within the Council's latest validation checklist (April 2022), or whether they will continue to apply it as a condition as they are currently.

We would also ask for clarity as to whether schemes will be required to demonstrate full compliance with the criteria listed or just a demonstration of how applicants' have sought to meet them. If it is the former, we would refer back to our earlier comments regarding prescriptive requirements above and beyond current adopted Local Plan policies (such as requiring Code Level 4/ a 19% improvement on the Dwelling Emission Rate) and ask that these be removed from the checklist.

Similarly, in respect of the proposed SUDs Pro Forma at Appendix D, we would ask that the Council clarify whether this will become an application validation requirement upon adoption of the SPD, as it is not listed within the Council's April 2022 checklist. Furthermore, several of the requirements within the pro forma relate to detailed design and ongoing management arrangements during construction (including Management Plan / Management Schedule / Pollutant Spillages Action Plan/ Watercourse Survey and Report) which applicants are unlikely to be in a position to confirm or satisfy at the outset, so again it would be good to clarify which elements will be expected up front and which can be dealt with through the application determination process or via condition.

I trust the enclosed representations are clear, and would appreciate confirmation of receipt and acceptance, and notifications of any future consultation or consideration of this document.

Yours faithfully,

[redacted]

Graham Lamb
Senior Director
[redacted]

- **Enclosure 1 –** Taylor Wimpey Environment Strategy 2021

Taylor Wimpey plc

Building a better world

Environment Strategy 2021

From our CEO

At Taylor Wimpey we aim to build great homes and thriving communities.

We're proud to create places that will be enjoyed by generations of people for decades and even centuries to come. Yet today we recognise that future generations face an uncertain future – our planet is in trouble.

A crisis we can't ignore

From climate change to biodiversity loss, the scale of the environmental crisis has never been more apparent. Global temperatures are rising, ecosystems are breaking down and our wild places are littered with plastic waste. We are seeing these changes happen in front of our eyes and the science tells us that we all need to act and to act quickly.

We want to be part of the solution.

Building a better world

With the launch of our environmental strategy we will play our part in creating a greener, healthier future for our customers, colleagues and communities.

We will join the global fight to stop climate change, improve access to and enjoyment of nature for our customers, and use fewer and more sustainable resources. We are committing to challenging targets and to working together with others to bring about change.

What we will do

We will cut our own environmental footprint, reducing emissions and waste, conserving precious resources and regenerating the natural environment on our developments. Our ambitious science-based carbon reduction target will ensure we align our progress with the international Paris Climate Agreement.

We will engage our supply chain, influencing positive change beyond our business and reducing the significant environmental impacts associated with the goods and services we buy.

We know that people today want to live more sustainably but that this isn't always easy to do. Through the changes we make to our homes and developments, we will enable our customers to achieve their aspiration of a greener and healthier lifestyle.

A challenge and an opportunity

Delivering our targets will be challenging and require action from every colleague across our business as well as collaboration with our peers, NGOs and government. Yet we know that it will make us a stronger business and help us to create even better places to live for our customers.

Together we can help build a more sustainable future.

Pete Redfern
Chief Executive

Our vision

“Our world – our home – is in trouble and we aren’t standing on the sidelines watching. We want to be part of the solution – working together to minimise the impact we have on climate change and protecting our planet for future generations. We’re committing to challenging, measurable targets based on science, to making changes in the way we work and to reducing our footprint. By thinking globally and acting locally, we will play our part to create a greener, healthier home for us all.

Let’s build a better world together.”

How will our strategy benefit our business?

Our strategy will make us a stronger business today and for the long term.

It's the right thing to do

The science is clear – we all have to act now to prevent catastrophic climate change and biodiversity loss. As a responsible business, we want to play our part in creating a sustainable future for everyone.

Creating great places to live

Our environment strategy will help us meet changing customer expectations. It will see us reduce the environmental footprint of our homes and enable customers to live a greener lifestyle. By creating space for nature on our developments we will make them more attractive places to live and support our customers' physical and mental wellbeing.

Our recent customer research found that 43% of people consider the environment an important factor when choosing who to buy a new build home from with issues such as energy and water efficiency, and access to green space particular priorities. The research also showed that 42% of people were more focused on environmental issues as a result of the pandemic.

A great place to work

Environmental issues matter to our colleagues. We want them to feel proud of the work we're doing to protect the environment and to have a chance to contribute. We know that a growing number of people look for jobs with purpose and prefer employers whose values they respect. Our strategy will help make us an employer of choice.

Meeting stakeholder expectations

Local authorities across the UK have declared a climate emergency. They want to work with housebuilders who can help them to create sustainable places to live. Centrally, the UK Government has set a goal to have a net zero emission economy by 2050. Investors increasingly look for companies who are acting to shape a more sustainable world and mitigating environmental risks. With our strategy, we can help these stakeholders to meet their objectives.

Improving efficiency and reducing costs

Many of the changes we are making will help us to operate more efficiently, use fewer resources and avoid waste. This will save our business time and money.

What are we focusing on?

Our strategy focuses on climate change, nature, and resources and waste. We have set ambitious quantitative targets to help drive progress in each area up to 2030.

Climate change is the most urgent environmental issue for our sector. We have a significant carbon footprint through our operations and an even greater impact through the goods and services we buy and the energy used in our homes once customers move in. Our business will feel the physical impacts of a changing climate and be affected by climate change regulation. We also have an opportunity to help our customers to live a lower carbon lifestyle through the way we design our homes and developments.

Nature is in serious decline in many parts of the UK. Housebuilding can contribute to loss of biodiversity but by creating high quality spaces for nature on our sites we can reverse this trend. A growing body of research shows that being close to nature is good for our physical and mental health, so increasing nature on our sites will make them better places to live for our customers. Our work on biodiversity will also help us to meet changing regulatory and planning requirements.

To build our homes we use large quantities of materials and **resources** and produce significant volumes of **waste**. This comes at a cost to our business and the environment. By working with our suppliers and colleagues to cut waste and select sustainably sourced materials we can improve efficiency and reduce risks to the business.

Our approach to sustainability also encompasses work on a range of social and economic issues. You can read about these aspects, including our investment in affordable housing and our support for youth employment through apprenticeships in our Sustainability Report, www.taylorwimpey.com

Supporting the UN Sustainable Development Goals

We've reviewed the UN Sustainable Development Goals to help us set our environmental targets. We can have most impact through our strategy on the following targets: 3.9, 6.4, 7.2, 7.3, 8.4, 11.2, 12.2, 12.5, 12.8, 13.1, 13.2, 15.2, 15.5, 15.9.

Our targets in brief

Our strategy focuses on three key areas and will see us make changes across our operations, supply chains and customer homes.

Building a better world

Climate change

Defend the planet and our future by playing our part in the global fight to stop climate change.

Key target

Achieve our science-based carbon reduction target:

- Reduce operational carbon emissions intensity by 36% by 2025.
- Reduce carbon emissions intensity from our supply chain and customer homes by 24% by 2030.

Key metric

- Greenhouse gas emissions per 100sqm completed homes (scope 1, 2 and 3) Tonnes $CO_2e/100m^2$.

Nature

Improve access to and enable enjoyment of nature for customers and communities by regenerating the natural environment on our developments.

Key target

Increase natural habitats by 10% on new sites from 2023 and include our priority wildlife enhancements from 2021.

Key metrics

- Percentage increase in natural habitats on new sites.
- Percentage of new sites with our priority wildlife enhancements and number of enhancements implemented.

Resources and waste

Protect the environment and improve efficiency for our business and our customers by using fewer and more sustainable resources.

Key target

Cut our waste intensity by 15% by 2025 and use more recycled materials. By 2022, publish a towards zero waste strategy for our sites.

Key metric

- Tonnes of construction waste per $100m^2$ build.

Climate change

Our approach

We have been working to reduce our greenhouse gas emissions for many years and, since 2013, we have achieved a 30% cut in emissions intensity from our operations. However, with the world needing to reach net zero emissions by 2050, we now need to go further. We will make significant cuts in our operational emissions by 2025 and increase our focus on reducing emissions associated with our supply chain and our customer homes in use.

We will also help our customers to reduce their own carbon footprint by the changes we make in our homes and by enabling more sustainable transport options.

Our climate impact

Our total carbon footprint, including from the homes we build and the goods and services we buy, was 2 million tonnes of CO_2 in 2020

1%

Our operations

Emissions from construction sites, offices, transport (scope 1 and 2 emissions)

40%

Customer homes

Future emissions from customers living in our homes and developments (scope 3)

59%

Supply chain

Emissions from raw materials, extraction, processing, manufacturing, transport (scope 3)

That's 210 tonnes per home we build

Our targets

Our science-based target

Achieve our science-based carbon reduction target:

- **Reduce operational carbon emissions intensity by 36% by 2025.**
- **Reduce carbon emissions intensity from our supply chain and customer homes by 24% by 2030.**

By adopting a science-based carbon reduction target we will reduce our footprint in line with the Paris Climate Agreement. Our targets have been approved by the Science Based Targets initiative which has confirmed that our operational target is consistent with reductions required to keep warming to 1.5°C. Our scope 3 goal meets the SBTi's criteria for ambitious value chain goals, in line with current best practice.

We will track our progress using an intensity metric, enabling us to reduce emissions as our business grows and we deliver homes to more customers.

Reducing energy use and switching to renewable sources

Reduce operational energy intensity by 32% for UK building sites by 2025.

Purchase 100% REGO backed green electricity for all new sites.

We will reduce some emissions at source by improving our energy efficiency as well as switching to renewable electricity.

Reducing emissions from our supply chain and customer homes

Reduce embodied carbon per home by 21% by 2030.

Reduce emissions from customer homes in use by 75% by 2030.

Our increased focus on scope three emissions will see us cut greenhouse gas emissions associated with materials and the products we buy (embodied carbon) and make our homes more energy efficient for customers.

Tackling emissions from transport

Reduce car and grey fleet emissions by 50% by 2025.

Make it easier for 40,000 customers to work from home and enable more sustainable transport choices through 36,000 EV charging points and 3,000 additional bike stands by the mid 2020s.

We'll tackle our own emissions from transport and also help customers to reduce their impact.

Adapt our business to a changing climate

Update our policies and processes to reflect the risks and opportunities from a changing climate by 2022.

We'll make sure our business is prepared for the impacts of climate change and do what we can to mitigate the impact on our customers.

Progress so far

- 30% reduction in carbon emissions intensity since 2013.
- 39% reduction in absolute carbon emissions since 2013.
- 58% green electricity purchased.
- 'B' rating in CDP Climate Change.

Nature

Our approach

We already integrate wildlife enhancements and habitat improvements on many of our sites. However, biodiversity loss in the UK is so acute that we need to do more and to use our sites to protect, enhance and increase biodiversity. We will integrate habitat improvements and wildlife enhancements across all our sites, meeting the new biodiversity net gain regulatory requirements and going further.

We will create opportunities for customers to engage with nature on our sites and through partnerships with nature organisations. Our goal is for our efforts to both benefit biodiversity and support residents' wellbeing and customer satisfaction.

Creating a positive impact

With the launch of our strategy we will:

- Allocate space for nature
- Partner with conservation organisations to develop our approach
- Integrate wildlife friendly features, like ponds
- Landscape our sites with wildlife friendly plants
- Include enhancements such as hedgehog highways
- Engage customers on nature

Our targets

Habitat and species improvements

Increase natural habitats by 10% on new sites from 2023 and include our priority wildlife enhancements from 2021.

We will increase natural habitat areas on our sites, compared with before development begins. Our approach will encompass all our regional business including those in Wales and Scotland not covered by net gain regulation.

Wildlife enhancements

Include our wildlife enhancements on all suitable new sites:

- **Hedgehog highways from 2021.**
- **Bug hotels (at least 20% of homes) from 2021.**
- **Bat boxes (at least 5% of homes) from 2022.**
- **Bird boxes (at least 80% of homes) from 2023.**
- **Wildlife ponds from 2024.**
- **Reptile and amphibian hibernation sites from 2025.**

All new sites have planting that provides food for local species throughout the seasons.

New sites will have a wildlife enhancement plan to encourage wildlife to make a home on our developments. Enhancements will be included on all sites that are suitable for the target species and where technically feasible. We will track our progress and assess the impact of our interventions on biodiversity.

Encouraging engagement with nature

Help customers engage with nature and create 20,000 more nature friendly gardens by 2025.

200 beehives on our sites by 2025.

We will create opportunities for customers to learn about and experience nature through our partnerships, and by helping them to implement nature friendly gardening techniques.

Progress so far

- Around 2,000 biodiversity enhancements on our sites every year.
- Ecological impact assessment carried out for all sites.
- Our Home for Nature Toolkit helps our teams implement wildlife enhancements.

Resources and waste

Our approach

Housebuilding is a resource intensive industry, using significant volumes of water, energy and materials and producing a lot of waste. We want to reduce this impact, selecting more recycled and sustainable materials, improving resource efficiency at every stage and designing out waste. Over time, we aim to adopt more 'circular' approaches to resource use and move towards net zero waste from the construction of our homes.

We can't yet quantify the environmental impacts of all the materials and resources we use. We will be working with suppliers to gather more data in this area as a key step towards improving our performance.

Air quality on our sites and in customer homes is an increasingly important issue and we will be conducting research to better understand our impact. We need to make sure that customers have the information they need to maintain air quality in their new build home.

Our impact

Use of materials such as timber, bricks and plasterboard

73,300 tonnes of construction waste

7.9 tonnes of construction waste per 100m² built

454 million litres of water used

97% of construction waste is recycled

Packaging a key source of construction waste

Our targets

Designing out waste

Cut our waste intensity by 15% by 2025 and use more recycled materials. By 2022, publish a towards zero waste strategy for our sites.

Engage with suppliers to meaningfully reduce plastic packaging on our sites by 2025.

Help 20,000 customers to increase recycling at home by 2025.

Our initial focus is on reducing construction waste, prioritising materials such as single-use plastic and making changes in our customer offer to encourage household recycling. We will also publish a towards net zero waste approach to help us further reduce our impact.

We will monitor progress using a waste intensity metric, so we can compare performance year on year, even as our business grows.

Conserving water

Reduce operational mains water intensity by 10% on a 2019 baseline by 2025.

Make it easier for 20,000 customer households in water stressed regions to install a water butt by 2025.

We already integrate water efficient taps and appliances in homes and will now enable customers in key regions to reduce water use in their gardens too.

More sustainable materials

Measure the environmental footprint of the key materials in our homes and set a reduction target.

Working with suppliers we will identify the key environmental impacts from our materials use and work together to reduce these.

Indoor and outdoor air quality

Measure air quality in our homes and on our sites in 2021.

Give customers the information they need to maintain good air quality in their homes by the end of 2021.

We will develop our approach in this area, improving our understanding of air quality on our sites and in our homes and supporting customers to maintain good internal air quality.

Progress so far

We are already working with our suppliers and site teams in our efforts to reduce waste. Key actions include:

- Our Waste Dos and Don'ts guide and induction process for site teams.
- A waste league table for our regional businesses.
- 15% of the potential bonus for Site Managers linked to performance on waste reduction.
- Partnering with suppliers to reduce off-cuts by specifying pre-cut materials.
- Over 19,400 paint pots reused or recycled from our sites last year.

How we will implement our strategy

Our environment strategy has been approved by our Group Management Team, our most senior executive committee, and our Board of Directors.

Responsibility for implementing our targets lies with our heads of disciplines and leaders in our regional businesses, and progress will be reported quarterly to our Group Management Team. Our Legacy, Engagement and Action for the Future (LEAF) committee, chaired by one of our executive team members, will monitor our progress.

Our network of Sustainability Champions, one in each regional business, will help us to implement our strategy on the ground and gather data on our performance.

We will be rolling out training to help equip colleagues and suppliers with the knowledge, skills and confidence they need to implement our approach and achieve our targets.

We will report our progress each year through our Annual Report and Accounts and our Sustainability Report.

Get in touch

We welcome your feedback on our approach to sustainability. You can contact us at: sustainability@taylorwimpey.com

More information is available on our website www.taylorwimpey.com/corporate/sustainability

CARBON TRUST STANDARD
REDUCING CO2 YEAR ON YEAR

FTSE4Good

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

CDP
DISCLOSURE INSIGHT ACTION

MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM

P22-1422_L002_PL_MAN_GL

24th August 2022

Forward Planning Team
Rossendale Borough Council
The Business Centre
Futures Park
Bacup
OL13 0BB

Sent by email

Dear Sir/ Madam,

Rossendale Draft Climate Change SPD
Representations by Rowland Homes

We have been instructed on behalf of our client, Rowland Homes, to submit representations to the current consultation on the draft Climate Change SPD, in respect of their land interests within Rossendale.

Introduction

These interests include the recent Local Plan allocation at 'Swinshaw Hall, Loveclough' (Ref: H4).

At the outset, we welcome the Council's proactive stance in declaring a Climate Emergency in 2019 and in seeking ways to address this through the planning policy regime. Indeed, Rowland Homes fully recognise the scale of the environmental crisis and are committed to being part of the solution.

Accordingly, we fully support the Council's overall aims for new development to mitigate emissions, be adaptable for the impacts of climate change, and support communities; and our comments below should be seen in this light.

Comments on Draft SPD

In overall terms we support the document, which generally provides supplementary guidance and information that directly cascades from the adopted plan policies, exactly as an SPD should; however, in certain instances it makes prescriptive requirements over and above current adopted policy requirements, including:

- Seeking 10% on site renewables on all schemes above 10 dwellings (in section 4, energy efficiency); and

[redacted]

- Requiring minimum of equivalent of Code for Sustainable Homes level 4/ a 19% improvement on the Dwelling Emission Rate over the Target Emission Rate as defined in Part L1A of the Building Regulations (in Appendix C - Checklist for Climate Change Statement.

Our concern with these additional prescriptive requirements is that they have not been formally tested through the Sustainability Appraisal process or an independent examination, as the Local Plan has, and therefore their implications on site viability and deliverability have simply not been considered.

It is also pertinent that some of the requirements mentioned (including Code Level 4 and the 19% improvement on the Dwelling Emission Rate), overlap with, and have or will be superseded by changes to Building Regs, some of which came into effect in June 2022 with further changes expected to follow in 2025.

Since the publication of the Housing Technical Standards in March 2015, the government have sought to take a more standardised approach to increasing energy performance standards by enshrining these within the Building Regulations regime, as opposed to a patchwork of different local plan policies; with the introduction of any local optional standards above Building Regs now needing to be justified with robust evidence on need and viability (which has not been provided in support of this SPD).

Accordingly, it is our view that the Building Regulations regime remains the most appropriate mechanism to address sustainable construction and energy standards, and that additional prescriptive local requirements could generate confusion. What's more in some cases the emerging Building Regs requirements actually exceed the additional measures proposed anyway (such as 2021 Part L which already exceeds Code Level 4).

Beyond that we welcome the guidance provided in Appendix C on the requirements for Climate Change Statement's going forward, but would ask that the Council clarify whether this will become an application validation requirement upon adoption of the SPD, as it is not listed within the Council's latest validation checklist (April 2022), or whether they will continue to apply it as a condition as they are currently.

We would also ask for clarity as to whether schemes will be required to demonstrate full compliance with the criteria listed or just a demonstration of how applicants' have sought to meet them. If it is the former, we would refer back to our earlier comments regarding prescriptive requirements above and beyond current adopted Local Plan policies (such as requiring Code Level 4/ a 19% improvement on the Dwelling Emission Rate) and ask that these be removed from the checklist.

Similarly, in respect of the proposed SUDs Pro Forma at Appendix D, we would ask that the Council clarify whether this will become an application validation requirement upon adoption of the SPD, as it is not listed within the Council's April 2022 checklist. Furthermore, several of the requirements within the pro forma relate to detailed design and ongoing management arrangements during construction (including Management Plan / Management Schedule / Pollutant Spillages Action

Plan/ Watercourse Survey and Report) which applicants are unlikely to be in a position to confirm or satisfy at the outset, so again it would be good to clarify which elements will be expected up front and which can be dealt with through the application determination process or via condition.

I trust the enclosed representations are clear, and would appreciate confirmation of receipt and acceptance, and notifications of any future consultation or consideration of this document.

Yours faithfully,

[redacted]

Graham Lamb
Senior Director
[redacted]

Homes England

Forward Planning Team,
Rossendale Borough Council,
Business Centre,
Futures Park,
OL13 0BB

By email: forwardplanning@rossendalebc.gov.uk

Monday 22nd August

Dear Sir / Madam,

Climate Change Supplementary Planning Document – Consultation

Homes England Response

As a prescribed body, we would firstly like to thank you for the opportunity to comment on the above consultation.

Homes England is the government's housing accelerator. We have the appetite, influence, expertise, and resources to drive positive market change. By releasing more land to developers who want to make a difference, we're making possible the new homes England needs, helping to improve neighbourhoods and grow communities.

Homes England does not wish to make any representations on the above consultation. We will however continue to engage with you as appropriate.

Yours faithfully,

[redacted]

P.P Nicola Elsworth
Head of Planning and Enabling

Homes England
[redacted]

[redacted]

[redacted]
www.gov.uk/homes-england

Rossendale
BOROUGH COUNCIL