Merton Council

Cabinet Agenda

Membership

Councillors:

Stephen Alambritis (Chair)
Mark Allison
Kelly Braund
Mike Brunt
Tobin Byers
Caroline Cooper-Marbiah
Nick Draper
Edith Macauley MBE
Martin Whelton

Date: **Monday 25 June 2018**

Time: **7.15 pm**

Venue: **Committee rooms C, D & E - Merton Civic Centre, London Road, Morden SM4 5DX**

This is a public meeting and attendance by the public is encouraged and welcomed. For more information about the agenda please contact democratic.services@merton.gov.uk or telephone 020 8545 3616.

All Press contacts: press@merton.gov.uk, 020 8545 3181

Cabinet Agenda

25 June 2018

Note on declarations of interest

Members are advised to declare any Disclosable Pecuniary Interest in any matter to be considered at the meeting. If a pecuniary interest is declared they should withdraw from the meeting room during the whole of the consideration of that mater and must not participate in any vote on that matter. If members consider they should not participate because of a non-pecuniary interest which may give rise to a perception of bias, they should declare this, .withdraw and not participate in consideration of the item. For further advice please speak with the Assistant Director of Corporate Governance.

CABINET
23 MAY 2018

(8.36 pm - 8.45 pm)

PRESENT: Councillors Stephen Alambritis (in the Chair), Mark Allison, Kelly Braund, Mike Brunt, Tobin Byers, Caroline Cooper-Marbiah, Nick Draper, Edith Macauley MBE and Martin Whelton

ALSO PRESENT: Councillors Eloise Bailey, Hina Bokhari, Anthony Fairclough, Daniel Holden, Paul Kohler, Simon McGrath and Carl Quilliam

Ged Curran (Chief Executive), Hannah Doody (Director of Community and Housing), Paul Evans (Assistant Director of Corporate Governance), Caroline Holland (Director of Corporate Services), Chris Lee (Director of Environment and Regeneration), Rachael Wardell (Director, Children, Schools & Families Department) and Dr Dagmar Zeuner (Director, Public Health)

1 APOLOGIES FOR ABSENCE (Agenda Item 1)

No apologies were received.

2 DECLARATIONS OF PECUNIARY INTEREST (Agenda Item 2)

There were no declarations of interest.

3 MINUTES OF THE PREVIOUS MEETING (Agenda Item 3)

RESOLVED: That the minutes of the meeting held on 19 February 2018 are agreed as an accurate record.

4 CONSTITUTION OF COMMITTEES (Agenda Item 4)

The Chair introduced the report which set out the nominations for committees and other bodies appointed by the Cabinet.

RESOLVED:

A. That the Cabinet appoints two Cabinet members and two substitute members to the South West London Joint Waste Management Committee as detailed in Appendix A to the Cabinet report.

B. That the Cabinet appoints two Cabinet members, to the Wandle Valley Regional Park Trust as detailed in Appendix A to the Cabinet report.

C. That the Cabinet appoints the Leader of the Council to the South London Partnership Joint Committee, as detailed in Appendix A to the Cabinet report.

D. That the Cabinet appoints three Cabinet members to the Merantun Development Limited Sub-Committee (previously called the Local Authority Property Company Sub-Committee) as detailed in Appendix A to the Cabinet report.

E. That the terms of reference for the South West London Joint Waste Management Committee as detailed in Appendix B to the Cabinet report be approved. These terms of reference have also been included for information in the Constitution of Committees and Outside Bodies report to Annual Council.

F. That the terms of reference for the Merantun Development Limited Sub-Committee, set out in Appendix C to the Cabinet report be approved. These terms of reference have also been included for information in the Constitution of Committees and Outside Bodies report to Annual Council.

G. That authority be delegated to the Chief Executive to fill vacancies on the bodies detailed at recommendations A and F on the nomination of the Party Whip of the group with a vacant position.

5 ADOPTION OF DEVELOPMENT VIABILITY GUIDANCE AND PUBLICATION OF DEVELOPERS VIABILITY APPRAISALS (Agenda Item 5)

The Cabinet Member for Regeneration, Housing and Transport presented the report, thanking all those involved and outlining the benefits of the proposals.

RESOLVED:

1. That the Development Viability supplementary planning document (SPD) at Appendix 1 to the Cabinet report, and the planning application checklist at Appendix 2, be adopted meaning that from 1 June 2018 planning applicants should expect to publish the development viability appraisals submitted with planning applications in Merton.

6 CHILDREN'S COMMUNITY SERVICES CONTRACT EXTENSION (Agenda Item 6)

The Cabinet Member for Adult Social Care and Health presented the report, thanking all those involved and outlining the benefits to the proposal.

RESOLVED:

A. That the extension of the current Merton Children's Community Health Services Contract with Central London Community Healthcare (CLCH) for a further period of 2 years from 1 April 2019 to 31 March 2021 be approved.

7 ACTION PLAN ARISING FROM THE SCRUTINY TASK GROUP REVIEW OF CROSSOVERS IN MERTON (Agenda Item 7)

The Cabinet Member for Regeneration, Housing and Transport presented the report, thanking all those involved in the scrutiny task group and the officers in drafting an action plan.

RESOLVED:

1. That the Highways Team strengthen advice and guidance for residents who wish to implement crossovers, including design and materials, to be completed by end of July 2018.
2. That the Merton crossover policy be reviewed to ensure it complies with plain English guidance, and will be re-written and approved by Merton User groups.
3. That the Highways Team hold information sessions with councillors about the crossover policy. These will be arranged after the new Criterion has been agreed in June 2018
4. That the Short Frontage depth Agreements be increased from 4.0 metres to 4.3 metres minimum and the Standard Crossover be increased from 4.5m to 4.8 metres.
5. That the Highways Team adopt and implement effective enforcement action to tackle the rise in illegal crossovers as set out in Appendix D to the report.
6. That the Highways Team conduct a review of fees charged for crossovers to ensure these cover the full cost of managing the service as set out in Appendix D.
7. That the Highways Team take action to reduce parking stress caused by the rise of crossover applications in controlled parking zone areas. Parking stress measured at 2.5 permits issued per on street bays will be measured as maximum as set out in Appendix B1.
8. That the Highways Team implement a process to manage the increase in applications for crossovers when a controlled parking zone is proposed.

8 WASTE COLLECTION -RECYCLING CONTAINERS (Agenda Item 8)

Cabinet noted that the item had been withdrawn.

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Committee: Cabinet

Date: 25 June 2018

Wards: All

Subject:	**Scrutiny review of the implementation of the *Prevent* duty in Merton's schools**
Lead officer:	Annette Wiles, Scrutiny Officer
Lead member:	Councillor Dennis Pearce, Chair, Children and Young People Overview and Scrutiny Panel
Contact officer:	Annette Wiles, Scrutiny Officer (0208 545 4035/ annette.wiles@merton.gov.uk)

Recommendations:

1. That Cabinet considers the report and recommendations (attached in Appendix 1) arising from the scrutiny review of the implementation of the *Prevent* duty in Merton's schools undertaken by the Children and Young People Overview and Scrutiny Panel.
2. That Cabinet agrees to the implementation of the recommendations through an action plan being drawn up by officers in consultation with the lead Cabinet Member to be designated by Cabinet.
3. That Cabinet decides whether it wishes to formally approve this action plan prior to it being submitted to the Children and Young People Overview and Scrutiny Panel.

1 PURPOSE OF REPORT AND EXECUTIVE SUMMARY

1.1. To present the scrutiny review report on the implementation of the *Prevent* duty in Merton's schools for endorsement and seek approval to implement the review recommendations through an action plan being drawn up.

2 DETAILS

2.1. The Children and Young People Overview and Scrutiny Panel has recognised the importance of the role schools play in the implementation of the *Prevent* duty to help keep children and young people from risk of radicalisation. Members were mindful of the four terror attacks that happened in just three months between the end of March and the end of June 2017, (Westminster, Manchester, London Bridge and Finsbury Park).

2.2. In commissioning the task group their aspiration was to highlight, collate and share *Prevent* practice as well as support the Merton community to work collectively to prevent radicalisation.

2.3. The report of the task group on the implementation of the *Prevent* duty in Merton's schools was presented to the Panel on 1 February 2018 and is attached at Appendix 1 for Cabinet's consideration.

3 ALTERNATIVE OPTIONS

3.1. The Children and Young People Overview and Scrutiny Panel can select topics for scrutiny review and for other scrutiny work as it sees fit, taking into account views and suggestions from officers, partner organisations and the public.

3.2. Cabinet is constitutionally required to receive, consider and respond to scrutiny recommendations within two months of receiving them at a meeting.

3.3. Cabinet is not, however, required to agree and implement recommendations from Overview and Scrutiny. Cabinet could agree to implement some, or none, of the recommendations made in the scrutiny review final report.

3.4. If Cabinet is unable to support the implementation of a recommendation, it is expected that a clearly stated reason will be provided for each.

4 CONSULTATION UNDERTAKEN OR PROPOSED

4.1. In carrying out its review, the task group questioned council officers, directors, members of the Merton community and visited schools in Merton.

4.2. Appendix 1 of the task group report lists the witnesses at each meeting.

5 TIMETABLE

5.1. The final report was approved by members of the Panel at its meeting on 1 February 2018 and it was agreed to present the report to Cabinet.

5.2. Cabinet is asked to provide a formal response to the Panel within two months.

6 FINANCIAL, RESOURCE AND PROPERTY IMPLICATIONS

6.1. None for the purposes of this covering report. Any specific resource implications will be identified and presented to Cabinet prior to agreeing an action plan for implementing the report's recommendations.

7 LEGAL AND STATUTORY IMPLICATIONS

7.1. None for the purposes of this report.

8 HUMAN RIGHTS, EQUALITIES AND COMMUNITY COHESION IMPLICATIONS

8.1. None for the purposes of this report.

9 CRIME AND DISORDER IMPLICATIONS

9.1. None for the purposes of this report.

10 RISK MANAGEMENT AND HEALTH AND SAFETY IMPLICATIONS

10.1. None for the purposes of this report.

11 APPENDICES – THE FOLLOWING DOCUMENTS ARE TO BE PUBLISHED WITH THIS REPORT AND FORM PART OF THE REPORT

11.1. Appendix 1 – task group review report of the implementation of the *Prevent* duty by Merton's schools.

12 BACKGROUND PAPERS

12.1. None

London Borough of Merton

Report and recommendations arising from the scrutiny task group review of the implementation of the *Prevent* duty in Merton's schools

Children and Young People Overview and Scrutiny Panel

February 2018

Pupils from Sherwood Primary visit the House of Commons

Task group membership

Councillor Adam Bush
Councillor Edward Foley
Councillor James Holmes
Councillor Joan Henry (Chair)
Councillor Kelly Braund
Councillor Pauline Cowper
Councillor Philip Jones

Scrutiny support

Annette Wiles, Scrutiny Officer
For further information relating to the review, please contact:

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Acknowledgements

The task group would particularly like to thank the council officers and directors who shared their experiences and thoughts with us. In addition, we would like to thank all the schools that supported the work of the task group by hosting our visits and allowing us to understand better how the *Prevent* duty is being implemented in Merton's schools. We are also grateful to the community partners that participated in our work.

All contributors are listed in Appendix 1.

Forward

It has been a pleasure to lead this task group looking at the implementation of the *Prevent* duty in Merton's schools. The decision to form the task group was set against the background of the four terror attacks that happened between March and June 2017; we wanted to reassure ourselves that Merton's schools are successfully implementing the duty and doing everything possible to prevent our young people from becoming radicalised and doing so in a way that doesn't cause stigmatisation of individuals or communities.

We have found our visits to four of Merton's schools reassuring. Schools know the duty well, are comfortable with its implementation and are embedding this within their safeguarding practice as another way to keep children safe from harm. We were delighted to see some *Prevent* practice taking place within the classroom and how schools are using initiatives such as the UNICEF *Rights Respecting Schools* programme to bring this to life for children. As a result, our recommendations are focused on continuing to improve this practice and to raise awareness of this amongst Merton's community groups.

I would like to thank the other members of the task group for all their hard work and time. Additionally, we are more than grateful to the officers who have supported our work and the community groups that got involved. Our particular thanks goes to those schools (Sherwood, Dundonald, Merton Park and Harris Merton), their staff and children, that hosted our visits. These were a high point of our work. It was both beneficial and rewarding to visit schools to talk to children about concepts such as diversity, tolerance and the British democratic process.

Cllr Joan Henry
Chair of the *Prevent* duty task group

List of the task group's recommendations

	Responsible decision making body
Recommendation 1 The scope of this task group has focused on the implementation of *Prevent* in Merton's schools. However, our work led us to understand that preventing radicalisation of Merton's young people requires the support of the whole community. We therefore would like to be sure that other organisations that interact with young people such as sports groups, youth groups, training providers and social landlords etc feel comfortable dealing with safeguarding referrals. We recommend that the Children and Young People Overview and Scrutiny Panel pick this up in its next work programme either through an item at a Panel meeting or through a further task and finish group.	Children and Young People Overview and Scrutiny Panel and Safer & Stronger Executive Board
Recommendation 2 We recommend the need to proactively work with the Merton community to deliver the *Prevent* duty. We recommend that the Joint Consultative Committee with Ethnic Minorities engage with local community groups to promote the good work being done in schools to deliver the *Prevent* duty in Merton and to explore ways in which community groups can support its delivery.	Joint Consultative Committee with Ethnic Minorities
Recommendation 3 The idea that schools provide young people with a narrative that change is achieved through struggle and time and is not achieved through violence is powerful. We didn't have the opportunity to explore how Merton's schools may already be doing this. However, we recommend that it would be good to explore how through the agreed syllabus support can continue to be offered to schools in developing counter narratives.	SACRE
Recommendation 4 Based on the four schools we visited we found that despite this being a new duty, imposing an additional workload, Merton's schools, supported by the local authority, are now delivering the *Prevent* duty which should be celebrated. As a task group we would like to take this opportunity to thank Merton's schools and officers for their work safeguarding the welfare of students including through their implementation of *Prevent*.	The *Prevent* task group
Recommendation 5 We recommend Merton's schools continue to share their *Prevent* practice and their growing expertise. This would	Children, Schools and Families Department in partnership with school

allow Merton's schools to develop additional opportunities to learn from each other as well as allowing schools to reach out into and build links with other communities which would support their implementation of *Prevent.* We recommend that the Children, Schools and Families Department explore ways to encourage and support the Merton family of schools to share their *Prevent* practice to learn from each other.	governing bodies and proprietors
<u>Recommendation 6</u> Specifically, we recommend that the opportunity to utilise The UNICEF *Right's Respecting Schools* Programme to deliver the *Prevent* duty continues to be promoted to all Merton's primary schools. Information about how this is already being successfully used by some of Merton's schools should be provided. This would help more of Merton's schools receive their level 2 *Rights Respecting Schools* Award which requires schools to be outward facing and active in building community links. Thought should be given to identifying other programmes that promote rights and respect that could support the delivery of the *Prevent* duty in Merton's schools. We noted the work done by Stonewall with schools in promoting diversity and tolerance.	Children, Schools and Families Department in partnership with school governing bodies and proprietors
<u>Recommendation 7</u> We recommend that the MASH continue to work with schools to understand their respective duties and information sharing requirements around the *Prevent* duty.	Children, Schools and Families Department

Report of the *Prevent* duty task group

Purpose

1. The Children and Young People Overview and Scrutiny Panel has recognised the importance of the role schools play in their implementation of the *Prevent* duty to help keep children and young people from risk of radicalisation. Members were mindful of the four terror attacks that happened in just three months between the end of March and the end of June 2017, (Westminster, Manchester, London Bridge and Finsbury Park). In commissioning the task group their aspiration was to highlight, collate and share *Prevent* practice as well as support the Merton community to work collectively to prevent radicalisation.
2. In order for the review to be effective (and achieved in the time constraints imposed by the forthcoming local elections in May 2018), it was agreed that the task group would exclusively focus on the *Prevent* practice demonstrated by Merton's schools.
3. Additionally, it was agreed that if feasible, the task group would consider examples of innovative and successful practice in schools from outside the borough.
4. The terms of reference for the task group were agreed as follows:
    a. To examine the full range of *Prevent* practice being delivered in Merton's schools including primary, secondary and special settings;
    b. To identify practice that is effective and innovative as well as any specific challenges faced in delivering the duty and how these are addressed by schools;
    c. To consider the support provided by borough Police and the wider Merton Safeguarding Children's Board partnership (which includes schools themselves);
    d. To identify any additional support that school practitioners would welcome being provided by Merton's *Safer and Stronger Partnership*;
    e. To look at how schools work to safeguard their pupils from being stigmatised by the duty; and
    f. To collate, celebrate and disseminate *Prevent* practice happening in Merton's schools to assist local practitioners and those outside of the borough.

What the task group did

5. The work of the task group can be split into four main areas:
    a. *Prevent* training;
    b. Desk research;
    c. Consultation with the local community; and
    d. School visits.

Prevent training

6. The task group benefitted from presentations on the *Prevent* duty provided by Evereth Willis, Equality and Community Cohesion Officer for the Council and Keith Shipman who supports the Merton family of schools in its implementation of the duty. Additionally, task

group members attended governor training on the *Prevent* duty. Cllr Henry, in her role as chair of the task group, also attended a GovNet conference on the role of education in tackling radicalisation.

7. We have learned that *Prevent* is the Government's strategy to respond to the challenge of extremism and seeks to prevent individuals being drawn into terrorism. It is just one part of *Contest*, the Government's broader counter-terrorism strategy.

8. The *Prevent* strategy responds to the ideological challenge of terrorism and the threat faced from those who promote it. The objective is to prevent individuals from being drawn into terrorism and ensure that they are given appropriate advice and support. *Prevent* is delivered in partnership with sectors and institutions where there are risks of radicalisation that need to be addressed. Priority areas include education, faith, health, criminal justice and charities.

9. The terms extremism and radicalisations are precisely defined by the *Prevent* strategy;
    a. Extremism is the vocal or active opposition of fundamental British values, the rule of law, individual liberty and mutual respect and tolerance of different faiths and beliefs; and
    b. Radicalism is the process by which people come to support terrorism and extremism and, in some cases, to then participate in terrorist activity.

10. The *Channel Programme* is a key element of the *Prevent* strategy and is a multi-agency approach to protect people at risk from radicalisation; individuals at risk are identified, a multi-agency panel assess the nature and extent of the risk and then an appropriate support plan is developed based on individual needs. *Channel* is a voluntary process with interventions delivered by local partners and specialist agencies; it is about offering the individual support. It should also be noted that the panel may determine that there is no risk and that therefore no intervention is required.

11. The *Prevent* duty requires schools to 1) identify when pupils, their peers or their parents may be putting them at risk and to refer this through the agreed process (to the Merton Safeguarding Children Board and onto to the *Channel* Programme); 2) teach pupils *British Values* through the school ethos to help protect against radical narratives; and 3) take reasonable steps to ensure that the school building, staff and access to IT are all keeping pupils safe.

12. It was clarified that the *Prevent* duty is not intended to stop pupils debating controversial issues. On the contrary, schools should provide a safe space in which children, young people and staff can understand the risks associated with terrorism and develop the knowledge and skills to be able to challenge extremist arguments.

13. Possible signs of radicalisation were highlighted as being absent from education, out of character changes in dress, behaviour and peer relationships, secretive behaviour, losing interest in friends and activities, showing sympathy for extremist causes, glorifying violence and possessing illegal or extremist literature.

14. The scope of this task group has focused on the implementation of *Prevent* in Merton's schools. However, our work led us to understand that preventing radicalisation of Merton's young people requires the support of the whole community. We therefore would like to be sure that other organisations that interact with young people such as sports groups, youth groups, training providers and social landlords etc feel comfortable dealing with safeguarding referrals. We recommend that the Children and Young People Overview and Scrutiny Panel pick this up in its next work programme either through an item at a Panel meeting or through a further task and finish group (Recommendation 1).

Prevent in Merton

15. In total 37 *Prevent* referrals were made between June 2015 to June 2017. This includes 28 in total from education (76% of all cases). Of these, 14 were from primary schools. All referrals were male with 26 cases aged 16 and under and ten cases aged over 16 (one case has no recorded date of birth). Of the ten aged over 16, one case involves someone in their 30s and the rest are aged 16-19. There have been four cases that have been referred to *Channel*. All are secondary school referrals.

16. Conducted recently, (the final report was published on 25 August 2017), Ofsted's combined inspection of Children's Services in Merton includes the following comments under the judgement of the Merton Safeguarding Children Board (which was judged outstanding):

17. *"The comprehensive range of high-quality, up-to-date policies and procedures are exemplary. These are regularly reviewed by the board and the business improvement group to ensure compliance and to ensure that policies are relevant. The board promotes a strong and transparent learning culture, setting high standards and drawing effectively on independent research. The promote and protect young people subgroup (PPYP) provides strategic and effective oversight of multi-agency policies, protocols and procedures regarding children at risk, including risk from sexual exploitation, radicalisation and extremism.*

18. *"The board is actively engaged with the 'Prevent' duty on radicalisation, which includes a wide range of partners, including the police, schools and early years settings, and faith, voluntary groups and the wider communities. MSCB guidance on safeguarding children and young people from the harmful messages of violent extremism and terrorism has been reviewed to ensure its current relevance. The guidance is clear and informs partners of their safeguarding responsibilities. It incorporates helpful lists for recognising risk and links to referral pathways for the MASH and the Channel programme, which focuses on providing support at an early stage to people who are identified as being vulnerable to being drawn into terrorism. The board has also consulted with a range of community groups, especially with regard to its strategy on female genital mutilation, which is reviewed appropriately through the policy subgroup.*

Desk research

19. The Government consulted on the *Prevent* guidance just after the duty came into effect (conducted in March 2015). Schools were included in the respondent groups. This can

be read in detail here with the following headlines provided on what support schools wanted at this time:

a. Further clarity on the definitions of terms 'extremism' and 'British values';
b. Integrating the *Prevent* duty into existing safeguarding mechanisms;
c. The guidance to focus on working with faith groups and other community partners (to specifically bolster pupils' theological resilience to troubling narratives);
d. Further guidance on how to implement the objectives of the duty at a local level;
e. Templates for risk assessments, action plans and flow charts;
f. More training with guidance/clarity on who should receive this training and clear standards for training;
g. Funding – to provide dedicated funds to deliver the *Prevent* duty;
h. More clarity on what will be monitored in terms of the delivery of the duty and what mechanisms will be used to achieve this monitoring;
i. More examples of good practice and sharing of good practice using different forums including online;
j. The need to be careful about the weighting given to international terrorism against other forms of extremism, particularly Right Wing Extremism; and
k. Linkages established to related policies or strategies. For example, equalities and community cohesion.

20. It is notable that community respondents to the same consultation made clear their concern that front line workers might not be sufficiently knowledgeable or well trained to distinguish between extremism on the one hand and usual religious practice on the other. It was suggested that faith as a potential positive influence should be covered in the provided training.

21. Additionally, we found that *Prevent* has faced public criticism. For example, some teachers in England have expressed concern about being required to report pupils who show signs of being drawn into extremism. It has been stated that there is worry about the possibility of stigmatising Muslim students (here).

22. This research helped inform us before we started to engage with community partners and visit schools in Merton.

Consultation with the Merton community

23. We wrote to all the members of the *Joint Consultative Committee with Ethnic Minoriies* and invited them to attend an evidence gathering session to share their views on *Prevent* and specifically how this is being delivered in the borough's schools. Despite issuing this invite twice, only two organisations contacted us and attended the task group.

24. The Muslim Women of Merton: The Task Group heard from two members of the Muslim Women of Merton group, Yasmin Farooq and Fareeda Bader. Both work within the education sector, Yasmin as an inclusion mentor and parent coach/trainer and Fareeda as

a primary school teacher. However, both work outside of Merton and their professional knowledge is therefore not gained inside the borough.

25. They expressed concern about children with behavioural issues that are often vulnerable. There was also reference to children being stigmatised (it is assumed by the *Prevent* duty) and a lack of trust within the wide community/society.

26. Several suggestions were made to address these concerns. Yasmin and Fareeda called for:
    a. Community-based initiatives that support dialogue across communities, overcome disengagement and isolation and promote cohesion and peace. The example of the *Peace of Cake* initiative was cited; this is operating in Lewisham and a few other London Boroughs and offers simply social occasions to bring people together to help overcome resentments and allow communities that haven't previously met to get to know each other. Subsequently, we learned that this initiative has been employed in Merton with the Baitul Futuh Mosque. A similar event, entitled '*Diversi-tea,'* was also delivered by the Merton Islamic Community Centre that brought together people of faith and no faith;
    b. Provision of parenting training that is culturally appropriate for parents from the Muslim community. Parents need support especially where their children are vulnerable but this needs to be culturally appropriate in order to be effective. The example of *Approachable Parenting* was given. This is a parent training initiative that is described as, "guiding Muslim families to better parenting"; and
    c. Opportunities for safe and secure outlets for children and young people outside of school that are provided in such a way that children from a Muslim background are able to participate. The example of the *Muslimah* initiative was provided; this was a youth club in Merton for Muslim girls and their friends with which their parents were happy for them to participate delivered by volunteers and supported by Merton Youth Service.

27. Task group members agreed to ask Yasim and Fareeda if they could survey the Merton Muslim community through their networks to find out if there are examples of schools in the borough that are acknowledged as:
    a. Undertaking activity to build community cohesion; and/or
    b. Providing out of school activities in such a way that offers safe and secure outlets for children and young people with which parents from the Muslim community feel comfortable.

28. Undertaking this survey wasn't feasible. However, the Muslim Women of Merton expressed their desire that more be done to explain *Prevent* and to work in partnership with community members to deliver the duty.

29. We recommend the need to proactively work with the Merton community to deliver the *Prevent* duty. We recommend that the Joint Consultative Committee with Ethnic Minorities engage with local community groups to promote the good work being done in schools to deliver the *Prevent* duty in Merton and to explore ways in which community groups can support its delivery (Recommendation 2).

30. Ray Skinner, Secretary and Trustee, Morden Park and Playing Fields Community Trust: presented the aspiration of the Morden Park and Play Fields Community Trust to use the former London playing fields site to provide sporting facilities and activities that promote community cohesion and mutual respect among different communities.

31. The aim is to bring the 65 acres of land given for the playing fields back into use for a range of sports through a community-led enterprise. It was highlighted that the trust deeds includes an explicit commitment to sporting activities being used to promote community cohesion.

32. Keith Shipman highlighted that community cohesion activity, part of the evidence of both groups, would in effect come before *Prevent* activity. This was a key part of the first iteration of the *Prevent* strategy; it was premised on the belief that community cohesion could be effective in preventing radicalisation. There remains a question about whether community integration would be effective in tackling the stigmatisation the Muslim community specifically feels as a result of *Prevent*.

33. We have concluded it is a good sign that so few community partners took up the opportunity to talk to us about *Prevent* in Merton's schools and may demonstrate that in Merton *Prevent* isn't seen as problematic or a significant issue for our community partners.

34. Dr Afzal Ashraf: we were fortunate to additionally meet with Dr Afzal Ashraf, who teaches at the School of Politics and International Relations at the University of Nottingham and has expertise in terrorism and counter terrorism, religious extremism, counter narratives, global security and conflict. (He is also a resident in the neighbouring borough of Wandsworth.)

35. Whilst Dr Ashraf is not familiar with the *Prevent* duty in schools he did express some discomfort with the approach and is concerned it places an unfair burden on schools. He highlighted that young people often have genuine grievances with the world which they desire to change and that these grievances can be magnified by those that seek to radicalise them. He suggested the need for schools to provide young people with a narrative that change is achieved through struggle and time and not through violence. Various historical examples were cited that could be studied to illustrate this counter narrative. For example, the abolition of slavery.

36. The idea that schools provide young people with a narrative that change is achieved through struggle and time and is not achieved through violence is powerful. We didn't have the opportunity to explore how Merton's schools may already be doing this. However, we recommend that it would be good to explore how through the agreed syllabus support can continue to be offered to schools in developing counter narratives (Recommendation 3).

School visits

37. We are fortunate to have been able to visit four of Merton's schools to look at their *Prevent* practice (three primary schools and one secondary). We are grateful to them for the time, information and advice that they provided to our work. We are reassured by our visits to

Merton's schools. We found that, contrary to the picture portrayed in the national media, Merton's schools are:

a. Comfortable with the *Prevent* duty; they understand the referral process and are successfully delivering teaching on '*British Values*';

b. Firmly embedding *Prevent* within other safeguarding practice. They clearly demonstrate that the duty is about protecting pupils from harm and not about criminalising behaviour. Risk of radicalisation is seen as being comparable to grooming that might lead to Child Sexual Exploitation;

c. Adding additional emphasis to teaching that was already happening before the duty came into place. All stated that they have had to become more overt in their teaching of *British Values* to deliver the *Prevent* duty rather than having to change the curriculum; and

d. Working with parents and carers as appropriate to safeguard pupils. This can involve anything from speaking directly with parents about a specific issue to providing generic information on safeguarding to holding events to engage parents or provide specific training for example on internet safety. All the schools we visited reported a good response from parents even if turn out at some events can be low.

Sherwood Primary School, Mitcham

38. Task group members (Cllrs Braund, Henry, Holmes and Jones) were delighted to visit Sherwood Primary School in Mitcham (during mid November 2017). This is a two form entry primary school with nursery provision, located in the east of the borough close to Mitcham Common. Pupils are drawn from a wide and diverse range of minority ethnic backgrounds with no dominant group. Sherwood had just received an Ofsted inspection (finishing earlier in the same week as the task group's visit) with the judgement awaited.

39. The visit was hosted by Executive Head, Tina Harvey. During the visit task group members attended assembly, met and talked to the members of the school council, enjoyed a tour of the school and met with Ms Philips, the head of religious education and Kam Matharu and Lucinda Varchione-Francis, the co-ordinators of the UNICEF *Rights Respecting Schools* programme (which forms part of the school's approach to spiritual, moral, social and cultural development).

40. During the visit, it was clearly demonstrated how the school is delivering the *Prevent* duty. This is strongly positioned as part of the school's robust safeguarding practice alongside support for issues such as online safety and anti-bullying. It is facilitated through the religious education curriculum, which is broad and encourages understanding and tolerance of those from other faiths, as well as the PSHE curriculum. It was emphasised that this approach starts in Early Years, and that the school is supported by parents and carers.

41. Sherwood uses both its school council and the UNICEF *Rights Respecting Schools* Programme[1] to support the delivery of the *Prevent* duty and to promote respect for others

[1] UNICEF describes the *Rights Respecting Schools* Award as embedding the UN Universal Declaration of Human Rights in daily school life, giving children the best chance to lead happy and healthy lives and to be responsible active citizens. Having seen it in action in a number of schools encompassing a range of communities, we wonder if part of its success comes from it being based on the Universal Declaration making it

amongst pupils. The school recently gained the *Rights Respecting Schools* level 1 award. Task group members saw how the scheme is reinforced through the school day. For example, in assembly where there was a focus on Article 15 (*Children have the right to meet together and to join groups and organisations, as long as it does not stop other people from enjoying their rights. In exercising their rights, children have the responsibility to respect the rights, freedoms and reputations of others*). Displays throughout the school showed the different articles. The school also uses opportunities such as *British Values Week* and *Democracy Week* as a means to focus on engendering tolerance and independence within the children.

42. Members of the school council were able to talk to the task group about the importance of democracy and valuing the views of others. They had recently visited the House of Commons with local MP Siobhain McDonagh in addition to visiting Cllr Marsie Skeet, the Mayor of Merton, at the Civic Centre building. It was noted that children were able to explain their rights in depth to Ofsted inspectors during their recent inspection. The school is currently working towards level 2 of the *Rights Respecting Schools* Award. This requires more community working and international links than level 1.

43. The school has not had any *Prevent* referrals and neither has it had any bullying or racist incidents to report. Tina Harvey confirmed that there is confidence in delivering the duty and that whilst the duty is challenging and has required changes in the curriculum and how it is delivery (making the focus on values more overt) the support received from the Council has been appropriate.

44. Task group members greatly enjoyed their visit and particularly value the time staff and pupils gave them to explain Sherwood's approach to the *Prevent* duty.

Dundonald Primary School, Wimbledon

45. Task Group members Cllrs Henry and Jones greatly enjoyed their visit to Dundonald Primary School in mid November 2017. This is a two-form entry primary located in Wimbledon. We are grateful to Headteacher Fiona Duffy and her deputy Katy Waters for supporting our visit.

46. The implementation of the *Prevent* duty is strongly positioned as part of the school's safeguarding practice. This starts with the school's ethos ("Our school community will provide a caring, safe and supportive environment where everyone is encouraged to be creative, challenged and happy in their work and play, and where UNICEF Rights are respected and valued by all") and is embedded throughout the school's work. The emphasis is very much on a whole child approach with a strong focus on the child's voice. Students are involved throughout the school reflecting the school's ethos and demonstrated through the school council, the annual bullying survey and initiatives such as the worry box accessible in every classroom. Even visitors to the school are reminded of their duties in helping safeguard children and every topic map includes a focus on how it will help deliver the *Prevent* duty.

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more effective among students and parents from a diverse range of backgrounds compared to an emphasis on 'British Values'.

47. Dundonald is another UNICEF *Rights Respecting School*. It holds level one and is working towards level 2. This is being delivered through a student-led steering group which is distinct from the school council. We were fortunate to see how the UNICEF universal rights are used and embedded through class practice by a visit to Year 4. Students were debating whether a character in the book they were reading should join a gang. We were delighted to hear eloquent arguments from both sides, with students demonstrating respect for the views of others with whom they disagreed. This emphasised the importance of listening to others and allowed students to put forward an argument against a view with which they disagreed. Like other classes, Year 4 had agreed their own class charter as a way of making the UN Charter relevant to each student. This involved a process where students were active in discussing and agreeing which aspects of the charter they wanted their class to focus on.

48. The school holds an international fortnight every two years which is used to promote the different cultures, languages and nationalities that comprise the school. This is used to emphasis how students are all different but equal, building respect, tolerance and understanding. It has also been a key way in which the school has managed to engage with its parent body, many of whom have seized this opportunity to showcase their own cultural background. This has helped breakdown barriers to participation which is to the benefit of safeguarding. The school has also provided parent workshops on subjects such as bullying and growth mindset and there is a parent forum which convenes every month.

49. The emphasis on different but equal was also reinforced by the school's recent participation in Odd Socks Day where children all wore differently decorated socks; all do the same job well but look very different.

50. Whilst our visit was quite brief, we saw an impressive variety ways the school is working to embed safeguarding practice and the *Prevent* duty.

Merton Park Primary School

51. This is a one form entry primary school situated in the Merton Park ward. Councillors Braun, Cowper, Henry and Jones represented the task group during the visit that took place in late November 2017. We are grateful to Headteacher Kirsty Gooderick and Deputy Head Kate Parson for their time and for supporting our visit.

52. As with the other schools we visited, *Prevent* is firmly embedded as part of the school's safeguarding strategy. The biannual and September refresh of staff safeguarding training was emphasised. The schools' approach is to never assume that 'it can't happen here'. One way in which the school protects children is by monitoring attendance very closely.

53. The school emphasises the importance of pupil voice; class councils support the school council feeding back ideas to be addressed. Students are also given the opportunity to make decisions. For example, students select what charity the school will support each year. The religious education curriculum promotes respecting difference whilst students are encouraged to be independent through initiatives such as older students running clubs for their younger peers.

54. As another UNICEF *Rights Respecting School* (the school has already achieved the level 1 award), the charter underpins and is reinforced through the behaviour policy as well as individual class charters. Good behaviour is encouraged in circle time and in the Star of the Week assembly. The aspiration is to make the rights real and tangible for students.

55. This is further reinforced through the curriculum where students are encouraged to focus on critical thinking and learn about how others don't benefit form the same rights that they enjoy. For example, students have learned about Aborigines and how indigent children were forcibly removed from their families.

56. To achieve the *Rights Respecting School* level two award, which focuses more on the school's relationship with the local community and on students being global citizens, students are being encouraged to discuss what is happening in the news (Newsday Tuesday). During Anti-Bullying Week, the school participated in Odd Socks Day to emphasise the different but equal message.

57. We were delighted to do a tour of the school which was led by members of the school council. During this we visited the ICT suite and saw how students are supported to keep themselves safe online. This includes a smart code which all students know well and an on screen button which allows them to instantly report content that makes them worried.

58. The school reported that it feels no discomfort in delivering *Prevent* and as with other schools it has incorporated *Prevent* into the existing curriculum. There hasn't been any negative reaction from parents. It has only made one referral specifically for *Prevent* which it was judged didn't need to be progressed.

Harris Academy Merton

59. This is a large mixed secondary school located in the Pollards Hill ward. We are grateful to Rachel Simpson, the SENCO and safeguarding lead (including *Prevent)*, for the time she gave us and for supporting our visit which took place in early December 2017 and was conducted by Councillors Henry and Jones.

60. Again, it was demonstrated that implementation of the *Prevent* duty sits firmly within and as part of the school's safeguarding policy. It was explained, that as part of Harris, the Academy benefits from advice on safeguarding, including *Prevent*, from both the federation and colleagues in Merton Council. This includes access to staff training on *Prevent* (WRAP training). The federation has provided the school with a generic safeguarding policy which it has adapted to reflect its own needs and context. This is supported by a more detailed policy on *Prevent*. The school has a governor with designated responsibility for safeguarding including *Prevent.* Reviews are held twice a year with the designated governor.

61. Delivery of the *British Values* element of *Prevent* is achieved through the school ethos and the existing curriculum. This has been extensively mapped to the *British Values* content. For example, in year 7 students learn about medieval history and the early development of government and democracy and students in all years must focus on critical thinking about texts in English. Again it was emphasised that *Prevent* has not required big changes within school but rather it has been about emphasising and/or being more explicit. The

school is now training pupils so they are able to make appropriate safeguarding reports. It is mindful of the need to be even handed and ensure that the focus on extremism isn't just about Islamic fundamentalism but also looks at the risks of radicalisation by right wing extremism. Work with pupils has been supported by the St Giles Trust which has delivered workshops for pupils on safeguarding issues including *Prevent* and gangs (the cost implications of this though are significant for the school). In addition to the school council, students also act as peer mentors with the aspiration for students to be trained to become wellbeing ambassadors. This helps support good communication between students which is important to safeguarding.

62. Harris works directly with parents especially where there is a concern about a student. Additionally, the school provides training sessions on issues such as internet safety (through CEOP) which could be better attended. However, the relationship with parents and their reaction to safeguarding concerns is good.

63. One particular issue identified by the Academy regards safeguarding for children that are from outside of the borough. This can be more complicated for the school to report and the support offered isn't always as comprehensive as that provided by Merton. Whilst the Academy is clear that it is its responsibility to ensure it receives a response to any referral it makes, this can sometime be a lengthy process and it would be good for agencies to respond in a more timely manner. It was noted that the software now used by the school for tracking referrals is good and has helped managed this process.

64. We have been interested to note that our experience of *Prevent* in Merton's schools is supported by the recently published research report from the Aziz Foundation: What the Prevent duty means for schools and colleges in England as a whole (here). This found that:
    a. Survey respondents had engaged with and accepted the idea of '*Prevent* as safeguarding';
    b. The majority of interview and survey respondents expressed fairly high levels of confidence with regards implementing the duty;
    c. The *Prevent* duty is perceived to have little changed the everyday practices of school staff;
    d. Most respondents did not perceive the *Prevent* duty to have had a 'chilling effect' on discussion and debate; and
    e. Few respondents questioned the legitimacy of the *Prevent* duty.

65. However, this report does raise the issue of workload burden and hidden costs which we encountered to a limited extent in our visits. Additionally, it cites concern amongst BME respondents that *Prevent* is making it more difficult to foster an environment in which students from different backgrounds get on well with one another. We didn't encounter this as an issue in our visits.

66. Based on the four schools we visited we found that despite this being a new duty, imposing an additional workload, Merton's schools, supported by the local authority, are now delivering the *Prevent* duty which should be celebrated. As a task group we would like to take this opportunity to thank Merton's schools and

officers for their work safeguarding the welfare of students including through their implementation of *Prevent* (Recommendation 4).

67. **We recommend Merton's schools continue to share their *Prevent* practice and their growing expertise. This would allow Merton's schools to develop additional opportunities to learn from each other as well as allowing schools to reach out into and build links with other communities which would support their implementation of *Prevent*. We recommend that the Children, Schools and Families Department explore ways to encourage and support the Merton family of schools to share their *Prevent* practice to learn from each other (Recommendation 5).**

68. **Specifically, we recommend that the opportunity to utilise The UNICEF *Right's Respecting Schools* Programme to deliver the *Prevent* duty continues to be promoted to all Merton's primary schools. Information about how this is already being successfully used by some of Merton's schools should be provided. This would help more of Merton's schools receive their level 2 *Rights Respecting Schools* Award which requires schools to be outward facing and active in building community links. Thought should be given to identifying other programmes that promote rights and respect that could support the delivery of the *Prevent* duty in Merton's schools. We noted the work done by Stonewall with schools in promoting diversity and tolerance (Recommendation 6).**

69. **We recommend that the MASH continue to work with schools to understand their respective duties and information sharing requirements around the Prevent duty (Recommendation 7).**

What happens next?

70. This task group was established by the Council's Children and Young People Overview and Scrutiny Panel and so this report will be presented to its meeting on 1 February 2018 for the Panel's approval.

71. Once approved by the Panel, it will go to Cabinet which will be asked to provide a formal response to the Panel within two months.

72. The Cabinet is asked to respond to each of the task group's recommendations, setting out whether the recommendation is accepted and how and when it will be implemented. If the Cabinet is unable to support the implementation of any of the recommendations, then it is expected that a clearly stated reason will be provided for each.

73. The lead Cabinet Member (or officer to whom this work is delegated) should ensure that other organisations to whom recommendations have been directed are contacted and their response to those recommendations is included in the report.

74. A further report will be sought by the Panel six months after the Cabinet response has been received, giving an update on progress with implementation of the recommendations.

Appendix 1: witnesses at meetings

- Evereth Willis, Equality and Community Cohesion Officer
- Keith Shipman, Education Inclusion Manager
- Yasmin Farooq and Fareeda Bader, the Muslim Women of Merton
- Ray Skinner, Secretary and Trustee, Morden Park and Play Fields Community Trust
- Dr Afzal Ashraf, the School of Politics and International Relations at the University of Nottingham
- Tina Harvey, Executive Head, Sherwood Primary School, Mitcham
- Kam Matharu and Lucinda Varchione-Francis, the co-ordinators of the UNICEF Rights Respecting Schools programme, Sherwood Primary School, Mitcham
- Fiona Duffy, Headteacher and Katie Walters, Deputy Head, Dundonald Primary School, Wimbledon
- Kirsty Gooderick, Headteacher and Kate Parsons, Deputy Head, Merton Park Primary School
- Rachel Simpson, the SENCO and safeguarding lead, Harris Academy Merton

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Committee: Cabinet

Date: 25 June 2018

Wards: All

Subject: Scrutiny review of the recruitment and retention of teachers in Merton

Lead officer: Julia Regan, Head of Democracy Services

Lead member: Councillor Peter Southgate, Chair of Overview and Scrutiny Commission

Contact Officer: Julia Regan; julia.regan@merton.gov.uk; 020 8545 3864

Recommendations:

1. That Cabinet considers the report and recommendations (attached in Appendix 1) arising from the scrutiny review of the recruitment and retention of teachers in Merton undertaken by the Overview and Scrutiny Commission;
2. That Cabinet decides how it wishes to respond to the recommendations of the task group. In particular whether it wishes to accept the recommendations and to respond to these through an action plan to be drawn up by officers in consultation with the lead Cabinet Member(s) to be designated by Cabinet;
3. That Cabinet decides whether it wishes to formally approve this action plan prior to it being submitted to the Overview and Scrutiny Commission.

1 PURPOSE OF REPORT AND EXECUTIVE SUMMARY

1.1. To present the scrutiny review report on the recruitment and retention of teachers in Merton and to seek approval to implement the review recommendations through an action plan drawn up by officers in consultation with a lead Cabinet Member to be designated by Cabinet.

2 DETAILS

2.1. This issue was initially drawn to the attention of the Children and Young People Overview and Scrutiny Panel by the headteacher of the Priory School. The Panel, mindful that this was a cross-cutting issue, particularly in relation to housing supply, referred the matter to the Overview and Scrutiny Commission.

2.2. The Commission agreed to establish a task group with very focussed terms of reference:

- To identify the issues that impact on the recruitment and retention of staff in Merton's schools;
- To consider how Merton Council and its partners can assist schools with the recruitment and retention of high quality staff in Merton's schools.

2.3. The task group's findings and recommendations are set out in a report for Cabinet's consideration, attached at Appendix 1.

3 ALTERNATIVE OPTIONS

3.1. The Overview and Scrutiny Commission can select topics for scrutiny review and for other scrutiny work as it sees fit, taking into account views and suggestions from officers, partner organisations and the public.

3.2. Cabinet is constitutionally required to receive, consider and respond to scrutiny recommendations within two months of receiving them at a meeting.

3.3. Cabinet is not, however, required to agree and implement recommendations from overview and scrutiny. Cabinet could agree to implement some, or none, of the recommendations made in the scrutiny task group's report.

4 CONSULTATION UNDERTAKEN OR PROPOSED

4.1. In carrying out its review, the task group questioned council officers and headteachers as well as receiving written views from newly qualified teachers in Merton.

4.2. Appendix 1of the task group report lists the written evidence received by the task group and Appendix 2 contains a list of witnesses at each meeting and details of visits made by the task group.

5 TIMETABLE

5.1. The report was approved by the Commission at its meeting on 25 January 2018 and it was agreed to present the report to Cabinet.

5.2. Cabinet is asked to provide a formal response to the Commission at its first meeting of the 2018/19 municipal year.

6 FINANCIAL, RESOURCE AND PROPERTY IMPLICATIONS

6.1. None for the purposes of this covering report. Any specific resource implications will be identified and presented to Cabinet prior to agreeing an action plan for implementing the report's recommendations.

7 LEGAL AND STATUTORY IMPLICATIONS

7.1. None for the purposes of this report.

8 HUMAN RIGHTS, EQUALITIES AND COMMUNITY COHESION IMPLICATIONS

8.1. None for the purposes of this report.

9 CRIME AND DISORDER IMPLICATIONS

9.1. None for the purposes of this report.

10 RISK MANAGEMENT AND HEALTH AND SAFETY IMPLICATIONS

10.1. None for the purposes of this report.

11 APPENDICES – THE FOLLOWING DOCUMENTS ARE TO BE PUBLISHED WITH THIS REPORT AND FORM PART OF THE REPORT

- Appendix 1 – task group review report on the recruitment and retention of teachers in Merton

12 BACKGROUND PAPERS

12.1. Notes of task group meetings

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London Borough of Merton

Report and recommendations arising from the scrutiny task group review of the recruitment and retention of teachers in Merton

Overview and Scrutiny Commission

January 2018

Task group membership

Councillor Peter Southgate (Chair)
Councillor Agatha Akyigyina
Councillor Joan Henry
Councillor James Holmes
Councillor Dennis Pearce
Helen Forbes (Co-opted Member)

Scrutiny support:

Julia Regan, Head of Democracy Services
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Acknowledgements

The task group would particularly like to thank the headteachers, newly qualified teachers and council officers who shared their experiences and thoughts with us.

All contributors are listed in Appendices1 and 2 of this report.

Chair's foreword
At the beginning of January, UCAS reported that applications for teacher training courses were down by one third on the previous year, threatening to make an already tight supply situation even worse in the future.

Merton schools are not immune from these pressures, and the decision to undertake a review of teacher recruitment and retention stems from concerns expressed to us by headteachers themselves.

What do we have going for us in Merton? The turnaround in the academic performance of our schools over the past 15 years is perhaps our biggest success story, and one that has been of enormous benefit to the life chances of our children. So we should celebrate that, and make sure newly qualified teachers know they will be gaining exceptional teaching experience if they start their careers in Merton.

As is often the case, we found that we have many benefits to offer teachers coming to Merton, but we don't always publicise them as well as we might. So several of our recommendations are to communicate what's already available more effectively – discounts on leisure facilities and health benefits, for example.

But we cannot ignore the prohibitive cost of housing in balancing the case for and against coming to teach in Merton. We take the view that home ownership is probably out of reach for anyone on a teacher's salary, and focussed our recommendations instead on the rental market, where teachers would be reliable tenants for both private and public landlords (including Merantun Development, Merton's own property company), justifying 3 – 5 year tenancy offers. More controversially, we make the case for subsidising rents in Merton properties where we wish to retain excellent teachers whom we might otherwise lose.

This review has packed in a lot of work in a short timeframe, interviewing witnesses and gathering evidence, in order to complete before council business is suspended for the local elections in May. Deadlines impose a useful discipline, but the burden has fallen squarely on Julia Regan, our hard working scrutiny officer who has turned this review around in record time. On behalf of all the members of the task group, I would like to record our grateful thanks to Julia.

Councillor Peter Southgate
Chair, Overview and Scrutiny Commission

Executive Summary

The task group was set up in order to investigate the difficulties that schools in Merton were experiencing with the recruitment and retention of teachers. The task group was also asked to consider how Merton Council and its partners could assist schools with the recruitment and retention of high quality staff.

The report is evidence based, drawing on and reflecting the wide range of written and oral evidence received. In particular, the task group has taken into account the experiences and views of local headteachers and newly qualified teachers. Task group members also spoke to council officers and received information about teacher recruitment and retention nationally.

The task group found that headteachers' experiences of recruitment and retention in Merton are similar to the national picture. Recruitment has been a particular challenge for headteachers, with the main barriers reported to be national issues (pay, status, workload) , lack of candidates and the cost of living in the local area. Retention is a lesser challenge, with a particular pinchpoint when teachers are about three years into their career and at a point when they no longer wish to continue living in short term rented or shared accommodation.

The task group noted that good school performance has a positive impact on both recruitment and retention and were therefore encouraged by evidence of sustained improvement in performance in Merton schools and the high proportion of schools that have been rated "good" or "outstanding" by Ofsted.

The task group found that the council already has appropriate systems and structures in place for teacher recruitment. It has made recommendations aimed at using these more effectively and promoting them more widely to headteachers.

Similarly, there is a range of benefits already on offer to teachers, so the task group has made recommendations to re-invigorate their promotion as well as encouraging governing bodies to organise activities that would promote staff health and wellbeing.

The cost of local accommodation was found to be a key factor affecting both recruitment and retention. The task group has made a number of recommendations that are intended to improve teachers' experience of the private rented sector, including the proposed introduction of an interest free loan to assist teachers with payment of rent deposits.

The task group's recommendations run throughout the report and are listed in full overleaf.

List of task group's recommendations

	Responsible decision making body
Recommendation 1 (paragraph 25)	
We recommend that Cabinet should confirm that it is committed to continuing to celebrate the successes of Merton's schools in order to attract teachers of the highest quality and to promote local schools as the first preference for parents seeking an excellent education for their children.	Cabinet
Recommendation 2 (paragraph 30)	
We recommend that the School Effectiveness Partnership Board should consider a more proactive and personalised approach to match applicants in the Eteach talent pool with specific school vacancies in order to increase its effectiveness.	School Effectiveness Partnership Board
Recommendation 3 (paragraph 37)	
We recommend that, once the government has released details, the School Effectiveness Partnership Board should consider if the teacher apprenticeship scheme could be implemented in Merton.	School Effectiveness Partnership Board
Recommendation 4 (paragraph 55)	
We recommend that the School Effectiveness Partnership Board should promote a wide range of recruitment routes to assist headteachers with advertising vacancies in their schools.	School Effectiveness Partnership Board
Recommendation 5 (paragraph 66)	
We recommend that the provision of a flu vaccine to school staff should be included in a service level agreement so that headteachers can assess the costs and benefits of taking up this service.	Cabinet
Recommendation 6 (paragraph 69)	
We recommend that Cabinet should encourage school governing bodies to organise activities in their school that would promote the general health and wellbeing of school staff. The council's Public Health team would be able to provide advice to governing bodies if required.	Cabinet

Recommendation 7 (paragraph 72)	
We recommend that Cabinet publicise to school staff and explain how to take up the existing council staff discount on annual memberships at Canons Leisure Centre, Morden Park Pools and Wimbledon Leisure Centre.	Cabinet
Recommendation 8 (paragraph 75)	
We recommend that all the benefits that are currently available to teachers and other school staff should be publicised to all school staff and clearly documented on all relevant webpages. This should include the interest free season ticket loan, purchase of a bicycle through the Cycle to Work Scheme (salary sacrifice) and nursery/childcare vouchers.	Cabinet
Recommendation 9 (paragraph 82)	
We recommend that Cabinet should ask the Head of Housing Needs and Strategy to write to local housing associations to ask if they have any “hard to let” properties that could be made available to teachers at an affordable rent (including short term assured tenancies).	Cabinet
Recommendation 10 (paragraph 84)	
We further recommend that Cabinet consider whether the 3-5 year private rental tenancies that will be available through the Local Authority Property Company from 2019/20 could be offered to teachers in the first instance, thus offering teachers an element of financial security.	Cabinet
Recommendation 11 (paragraph 87)	
We recommend that Cabinet should explore the business case for supporting the retention of excellent teachers in the borough by offering a small number of private rented properties through the Local Authority Property Company to such teachers at a reduced rent.	Cabinet
Recommendation 12 (paragraph 89)	
We recommend that Cabinet should ask the Head of Housing Needs and Strategy to approach the Landlords Forum with a “good tenant offer” whereby the council would guarantee a supply of teachers as private tenants for a fixed number of years in return for a reduced rent.	Cabinet
Recommendation 13 (paragraph 92)	
We recommend that Cabinet should ask the Head of Housing Needs and Strategy to provide school staff with a list of shared ownership schemes that might be suitable for teachers, whilst not recommending any scheme in particular.	Cabinet

Recommendation 14 (paragraph 96)	
We recommend that Cabinet consider setting up a rent deposit scheme that would operate in a similar way to the existing season ticket loan. This would provide teachers with an interest free loan that would be paid back to the council in a set number of instalments.	Cabinet
Recommendation 15 (paragraph 99)	
We recommend that the Sustainable Communities Overview and Scrutiny Panel should receive a briefing on the Mayor of London's London Living Rent initiative in order to identify potential benefits for Merton residents	Sustainable Communities Overview and Scrutiny Panel
Recommendation 16 (paragraph 103)	
We recommend that the School Effectiveness Partnership Board should consider how best to build on the effective programme of continuous professional development that is already being delivered. The Board could consider the role of local colleges and universities in further enhancing the options available, including through use of the Apprenticeship Levy.	School Effectiveness Partnership Board

Report of the Scrutiny Task Group Review of the Recruitment and Retention of Teachers in Merton

Introduction

Purpose

1. This issue was initially drawn to the attention of the Children and Young People Overview and Scrutiny Panel by the headteacher of the Priory School. The headteacher highlighted the difficulties that schools in Merton were experiencing with the recruitment and retention of teachers in particular but also other members of staff. She said that although there was evidence that this was not unique to Merton, she believed that there were measures that could be taken at a local level that would alleviate the situation.

2. The Children and Young People Overview and Scrutiny Panel, mindful that this is a cross-cutting issue, particularly in relation to housing supply, referred the matter to the Overview and Scrutiny Commission.

3. The Commission, mindful of the relatively short timescale for this review, agreed to establish a task group with very focussed terms of reference:

   - To identify the issues that impact on the recruitment and retention of staff in Merton's schools;
   - To consider how Merton Council and its partners can assist schools with the recruitment and retention of high quality staff in Merton's schools.

What the task group did

4. The task group has had four formal meetings plus two discussions with primary and secondary school headteachers. It has received a presentation on the national picture and the local context plus a number of background policy documents.

5. The task group sent a questionnaire to headteachers about their experiences of recruitment and retention. Newly qualified teachers were surveyed to find out what had attracted them to Merton and what factors would influence whether they stayed or moved elsewhere in future. The task group also wrote to local teaching unions inviting them to submit their views.

6. Appendix 1 lists the written evidence received by the task group and Appendix 2 contains a list of witnesses at each meeting.

7. This report sets out the task group's findings, conclusions and recommendations. The task group's recommendations run throughout the report and are set out in full in the executive summary at the front of this document.

The national picture

8. The State of Education Survey Report, 2016, found that 62% of headteachers nationally (76% for secondary schools) reported that recruitment and retention of teaching staff had been a difficult area to manage over the previous 12 months. The Survey found that recruitment and retention of teachers was reported to be the second highest concern for the next 12 months, after budget pressures.

9. The Survey found that 56% of heads in London schools stated they were facing a shortage of teachers compared to 37% nationally. Again the percentage was higher for secondary schools than for primary.

10. Headteachers reported that the biggest challenge they faced when recruiting teachers is the quality of applications (40%), followed by the low number of applications (21%). The demographics of the local area was less of a challenge (7%) as was school location (5%).

11. The main reason given for teachers leaving was to take up a job at another school. Workload pressures and retirement were also significant reasons for leaving. Relocation was cited as a factor by 31% of secondary heads and 24% primary heads; family reasons were cited by 7% secondary heads and 22% primary heads.

12. Governing bodies reported that they had taken a variety of steps to retain staff, including development opportunities, flexible working, non-monetary rewards or incentives and reduced paperwork or teaching hours.

13. The House of Commons Education Select Committee published a review report in February 2017on the recruitment and retention of teachers. The Select Committee considered supply-side factors as well as workload and professional development. They called for evidence based policies to improve the supply and retention of high quality teachers and recommended that school leaders should carry out exit interviews to better understand staff turnover.

14. The Select Committee found that the government has failed to meet its recruitment targets and recommended that, whilst continuing to seek to recruit sufficient new teachers, the government should also place more emphasis on improving teacher retention as a cost effective way of addressing supply as well as strengthening the pool of teachers to draw on for leadership positions. A number of recommendations were aimed at improving continuous professional development. The review also urged the government and Ofsted to recognise their role in increasing workload, which has been cited as a factor for teachers leaving the profession.

The local context

15. Merton primary and secondary headteachers reported to us that recruitment had been a difficult area to manage over the past 12 months. Retention was reported as slightly less difficult to manage than recruitment, particularly in primary schools

16. Headteachers reported that the key challenges and barriers to recruitment include national issues (pay, status, workload), lack of candidates and the cost of living in local area. Our discussion with secondary headteachers revealed the difficulties they experience in competing with Academy chains that can offer an enhanced salary and benefits package, new buildings, sixth forms and professional development programmes.

17. We noted that Merton schools have an advantage over neighbouring outer London boroughs of being able to pay the inner London weighting allowance (worth £2,000) to teachers.

18. The cost of accommodation was reported to be a key barrier for retention in both primary and secondary schools. Workload, salary and burnout were also cited as factors by primary heads. Secondary heads cited competition/poaching from other schools and the demands of the role.

19. We found that the pinch points for retention in both primary and secondary schools occur when teachers reach a point in their lives at which they wish to have more permanent accommodation arrangements and/or start a family. Often this will result in teachers moving away from the borough.

20. We heard that good school performance has a positive impact on teacher recruitment and retention. Merton, in having a high proportion of schools rated “good” or “outstanding” by Ofsted, therefore should have an advantage in being able to attract good teachers to work in the borough. Conversely, when a school is rated as “requiring improvement”, this can be destabilising for the school and lead to a high turnover of staff.

21. We were also pleased to hear that Merton has benefitted from the retention of a number of excellent headteachers for many years.

22. The council’s Children Schools and Families Department has put in place a number of mechanisms to support school effectiveness and these also have an impact on recruitment and retention. Strategic oversight of recruitment to maintained schools in Merton is provided by the School Effectiveness Partnership Board. The Board’s predecessor commissioned the production of a website to encourage teachers to work in Merton. The Board is currently reviewing the content of the

website and focussing on ways to support schools with recruitment and retention.

23. We were delighted to hear that recent figures released by the Department for Education showed that Merton was joint top in the country (with Brent) for progress towards GCSE, made between Key Stage 2 and Key Stage 4 (Progress 8). We hope that this success will encourage teachers to work in Merton and parents to send their children to Merton schools.

24. We were pleased to hear that the Department for Education Progress 8 study findings have already been publicised and that the good reputation of schools has resulted in an increase in the number of parents who are choosing a Merton school as the first preference for their child.

25. We recommend that Cabinet should confirm that it is committed to continuing to celebrate the successes of Merton's schools in order to attract teachers of the highest quality and to promote local schools as the first preference for parents seeking an excellent education for their children. (recommendation 1)

Task Group's Findings - Recruitment

Recruitment routes and methods

26. A number of different recruitment routes are available to schools, as set out in the paragraphs below. Our discussion with headteachers revealed that they will often pursue several routes either simultaneously or consecutively in order to maximise the number and quality of applicants. Primary and secondary heads reported difficulties in attracting sufficient high quality applicants.

27. Eteach website
Eteach works with over 7,500 schools and colleges and last year advertised more than 65,000 jobs to its 1.5 million registered candidates, who made 5 million job searches and 1 million site visits each month.

28. Merton has a service level agreement with Eteach. Each school that is registered with Eteach has a microsite on which its vacancies are advertised together with information about the school. Eteach also provides an NQT "talent pool" on which NQTs can log their CVs and that can be accessed by schools that are registered with Eteach

29. The council's bespoke website has an automatic link to direct applicants to the Eteach site:

Council website http://www.mertonteacherrecruitment.org.uk/

E teach home page http://www.eteachgroup.com

Eteach microsite https://www.eteach.com/microsite/contentpage.aspx?empno=3651&clusterid=735&pagetype=-10 (this is the Merton page that is accessed through link from the Merton website)

30. We understand that the School Effectiveness Partnership Board might have the scope to encourage a more proactive and personalised approach to be taken in matching applicants in the Eteach talent pool with specific school vacancies. We would like to encourage the Board to consider this and other measures that could be taken to increase the effectiveness of schools' use of Eteach.

31. We therefore recommend that the School Effectiveness Partnership Board should consider a more proactive and personalised approach to match applicants in the Eteach talent pool with specific school vacancies in order to increase its effectiveness. (recommendation 2)

32. Teach Wimbledon

33. Teach Wimbledon is a borough-wide consortium of 15 schools working in conjunction with the council and with Roehampton University to provide a direct route into teaching. It is open to applicants who have a 2:1 degree. Those who are successful at interview are allocated a host

school in which they work whilst also attending Roehampton University to study for a PGCE. Last year all 10 graduates from Teach Wimbledon subsequently got jobs in Merton schools (2 secondary and 8 primary).

34. SCITT
35. Another route in to teaching is school centred initial teacher training (SCITT) which has its own accreditation leading to a PGCE qualification – currently offered at Aragon Primary School. Open to all schools in the borough.

36. Apprenticeships
37. We understand that the new apprenticeship scheme could provide a route for newly qualified teachers but, to date, the scheme has been rather confusing, not well advertised and has a short timescale that has limited take-up. At present there are only two providers. The scheme has the potential to be very attractive to teachers as participants would be paid whilst studying and training.

38. **We recommend that, once the government has released details, the School Effectiveness Partnership Board should consider if the teacher apprenticeship scheme could be implemented in Merton.. (recommendation 3)**

39. Recruitment Agencies
40. Agencies actively recruit trainee teachers in colleges and encourage them to apply for teaching positions through the agency rather than direct to schools. The advantage to the applicant is that they only have to fill in one form in total rather than one per school.

41. Schools that don't recruit through an agency are therefore in competition with the agency to find the best teachers. Schools that do use an agency face considerable financial costs through the fee charged by the agency. We also heard that there is a lack of support from the agency post-placement.

42. We heard that these specialist recruitment agencies are a relatively new phenomenon and are having a particular impact on recruitment to secondary schools. The secondary headteachers told us that they would like local universities to encourage students to apply direct to schools and not through recruitment agencies.

43. We discussed whether it would be possible for Merton to set up its own recruitment agency with a single application form to encourage teachers to apply to Merton schools. On balance, our view is that a more effective use of ETeach as recommended above would be more cost effective for schools than contributing to the establishment and operation of a Merton recruitment agency.

44. Recruitment fairs
45. These are hosted by local universities and are a useful way to identify strong candidates and encourage them to apply for NQT jobs in Merton schools. We were advised that headteacher attendance at these fairs is particularly helpful, though we acknowledge that this requires a considerable time commitment from heads. We discussed whether it might be helpful for Merton to host a recruitment fair locally (as Croydon has done). This would have the advantage of enabling more headteachers to attend but the disadvantage that students might be less likely to travel to attend in Merton.

46. We were advised that recruitment agencies are increasingly advertising online and through social media as well as attending recruitment fairs.

47. Teaching placements and NQTs
48. Successful recruitment of excellent teachers is facilitated through the identification of promising teaching graduates as early as possible in the "supply chain", particularly through well supported teaching placements so that they are more likely to subsequently apply for a job in a Merton school.

49. Merton schools have established good links with local colleges and universities, particularly Roehampton University. This has led to trainee teachers being sent on placements and schools have been able to encourage good ones to apply for permanent positions as newly qualified teachers (NQTs).

50. Merton generally employs around 100 NQTs each year. We emailed the current NQTs to find out what had attracted them to apply for a job in Merton and what would be likely to encourage them to stay.

51. Of the 35 NQTs who responded to our survey, 8 said that their PCGE placement in a Merton school had been a significant factor in choosing to stay in Merton. They had enjoyed the placement and wished to stay either in the same school or another school in Merton.

52. A number of the NQTs already lived in Merton or nearby and so were attracted by the convenience of the journey to work – views differed on what "nearby" constitutes, for some it was up to an hour's journey and for others it was living in the vicinity of the school. Some of the NQTs cited the quality of the schools as a reason for working in Merton.

The council's role in supporting recruitment of teachers

53. We were advised that the council already has appropriate systems and structures in place for teacher recruitment but there is scope to use these more effectively through addressing co-ordination and capacity issues. The School Effectiveness Partnership Board would be the most

appropriate way to progress this, hence recommendations1 and 2 in the preceding sections.

54. We were told by headteachers that the “teaching in Merton” webpages jobs section of the council’s website was hard to find. However, the council’s website has been recently re-designed and when we looked at it we found that the dedicated webpage is now only two clicks from the council’s homepage, which makes it easy for potential applicants to find all the relevant information.

55. From our discussion with primary headteachers it was clear that some headteachers were not aware of all the potential recruitment routes that they could draw on. We understand that the School Effectiveness Partnership Board is compiling this information.

56. We recommend that the School Effectiveness Partnership Board should promote a wide range of recruitment routes to assist headteachers with advertising vacancies in their schools. (recommendation 4)

Task Group Findings – the Merton Offer

57. Our discussions with headteachers found that they would appreciate some support from the council in promoting the benefits of working in Merton and providing employee benefits such as discounts in local shops, gyms and access to mental and physical wellbeing initiatives. Their view was that such an offer would help to attract newly qualified teachers to work in Merton.

58. We were informed by the Head of HR that a "Merton Offer" already exists that brings together a number of benefits available to Merton officers that are also available to teachers. These are set out below. We welcome these and have made recommendations to enhance some aspects of the offer as well as a recommendation to publicise the offer to existing school staff and potential applicants.

59. Kaarp Employee Discount Scheme
60. This provides Merton officers and school staff with discounts for a wide range of products and services (holidays, entertainment, health and fitness, motoring, travel, finance…).

61. Employee Assistance Programme
62. Merton's Employee Assistance Programme enables staff to speak to someone in confidence about work or personal matters. Information sheets are available on a wide range of subjects that might impact on health or wellbeing at home or at work.

63. The service is available to staff in the 40 schools who have purchased the relevant service level agreement at a cost of around £4.50 per employee.

64. Flu vaccine
65. Frontline staff, including health and social care employees, are eligible for a free flu vaccine as part of the council's contract with its occupational health provider.

66. Schools could purchase this service at a cost of around £7.50 per employee, thereby potentially reducing the level of sickness and making a saving on the cost of supply cover.

67. We recommend that the provision of a flu vaccine to school staff should be included in a service level agreement so that headteachers can assess the costs and benefits of taking up this service. (recommendation 5)

68. Merton Health Day
69. A twice yearly event for staff in the Civic Centre providing a mini health check and information from a wide range of health and wellbeing practitioners. These are well attended by staff and feedback has been very positive. We recognise the logistical constraints but would like to

see similar opportunities provided to staff in schools – these could be organised by governing bodies to address the particular needs and circumstances of staff within that school.

70. We recommend that Cabinet should encourage school governing bodies to organise activities in their school that would promote the general health and wellbeing of school staff. The council's Public Health team would be able to provide advice to governing bodies if required. (recommendation 6)

71. Leisure centres
72. Merton Council staff receive a discount on annual memberships at Canons Leisure Centre, Morden Park Pools and Wimbledon Leisure Centre. This discount is already available to staff working in Merton schools. However, feedback from headteachers indicates that school staff may not be aware of their eligibility for this discount.

73. We recommend that Cabinet publicise to school staff and explain how to take up the existing council staff discount on annual memberships at Canons Leisure Centre, Morden Park Pools and Wimbledon Leisure Centre. (recommendation 7)

74. Other
75. Teachers already have access to an interest free season ticket loan, purchase of a bicycle through the Cycle to Work Scheme (salary sacrifice) and nursery/childcare vouchers.

76. We recommend that all the benefits that are currently available to teachers and other school staff should be publicised to all school staff and clearly documented on all relevant webpages. This should include the interest free season ticket loan, purchase of a bicycle through the Cycle to Work Scheme (salary sacrifice) and nursery/childcare vouchers. (recommendation 8)

Task Group Findings - Housing

77. Primary and secondary headteachers regard the cost of local accommodation as a key barrier to recruitment and retention. They have suggested that the council could help by:

- Providing support with finding accommodation for teachers at the start of their careers
- seeking affordable housing options for teachers
- promoting the benefits of working in Merton

78. During our discussion with headteachers, they stressed that newly qualified teachers typically houseshare for the first two to three years and then seek to move on to their own place. Headteachers asked whether it would be possible to offer a shared ownership scheme (or similar) to teachers who have worked in Merton for a minimum of three years in order to provide an incentive to stay.

79. When we asked the newly qualified teachers (NQTs)about what factors would determine whether they stayed in Merton, the cost of housing was by far the most significant factor for almost every respondent:

"very hard to rent in Merton due to cost"

"buying a house is a bit of a far off fantasy that may or may not happen"

80. Our discussion with the Head of Housing Needs and Strategy and the Head of Future Merton plus information about house prices locally have made it clear that purchasing property on the open market is out of the reach of most teachers working in Merton and this is particularly the case for those at the start of their careers.

81. We have therefore focussed our thoughts on measures that could be taken to improve teachers' experience of the private rented sector. We understand that rental property is still relatively affordable in Merton compared to other parts of London but it is subject to greater demand than ever before.

82. We do recognise that there are other groups of key workers and vulnerable groups in Merton who would also benefit from access to truly affordable housing. These groups were not included in the remit of this task group review and we have therefore confined our recommendations to teachers. In responding to our recommendations, Cabinet will no doubt bear these competing demands in mind.

83. We recommend that Cabinet should ask the Head of Housing Needs and Strategy to write to local housing associations to ask if they have any "hard to let" properties that could be made available to teachers at an affordable rent (including short term assured tenancies). (recommendation 9)

84. We heard that the Local Authority Property Company had been established to develop new purpose built properties for private rent that would provide an income stream for the council. A proportion of these would be affordable and would be managed by a housing association.

85. We further recommend that Cabinet consider whether the 3-5 year private rental tenancies that will be available through the Local Authority Property Company from 2019/20 could be offered to teachers in the first instance, thus offering teachers an element of financial security. (recommendation 10)

86. We were informed that the Local Authority Property Company (LAPC) is a private company so would not be able to offer a discounted rent to teachers. The Company's business plan and decision making sits with the LAPC board and is not part of the council's usual decision making processes .If the council were to take a decision to offer discounted rents then profitability of the LAPC and income to the council would be reduced. If the Council sought to subsidise housing for teachers via the LAPC, Merton Council would have to cover the cost differential, not the LAPC.

87. We are not persuaded that it would be impossible for the council to provide discounted rent to teachers, although we do accept that this would be a political decision for Cabinet to consider whilst balancing the needs of other groups of key workers and the impact that a discounted rent would have on the revenue stream that would be generated for the council.

88. We therefore recommend that Cabinet should explore the business case for supporting the retention of excellent teachers in the borough by offering a small number of private rented properties through the Local Authority Property Company to such teachers at a reduced rent. (recommendation 11)

89. We discussed the feasibility of brokering a deal with private landlords to encourage them to rent to teachers at a reduced rent in return for a guarantee from the council that they would have a supply of teacher tenants for a fixed number of years, thus ensuring good tenants, a fixed income from the properties and no voids.

90. We recommend that Cabinet should ask the Head of Housing Needs and Strategy to approach the Landlords Forum with a "good tenant offer" whereby the council would guarantee a supply of teachers as private tenants for a fixed number of years in return for a reduced rent. (recommendation 12)

91. We also discussed the potential for teachers to take advantage of shared ownership schemes. One such option is Share to Buy which is

the official portal of FIRST STEPS, the Mayor of London's affordable home ownership scheme :
https://www.sharetobuy.com

92. Our view is that shared ownership can be an expensive option. However, we don't wish to preclude teachers from making informed choices and therefore recommend that information about such schemes is made available to them.

93. We recommend that Cabinet should ask the Head of Housing Needs and Strategy to provide school staff with a list of shared ownership schemes that might be suitable for teachers, whilst not recommending any scheme in particular. (recommendation 13)

94. We considered whether it might be feasible to build accommodation for teachers on school land, or to use school caretaker homes that were surplus to requirements. There are many obstacles to proceeding along these lines, not least safeguarding issues as well as regulations regarding changing the use of school playing fields. Also, if the housing was on council land it would be subject to right to buy and the council's other housing needs priorities and therefore not necessarily available for teachers. Any further consideration would require detailed work over a period of time.

95. Finally, we wondered about the feasibility of issuing a council-backed bond as an investment vehicle for local residents that could be used to provide loans for mortgage deposit for teachers who have worked for Merton for a certain number of years and who undertake to remain for a further given number of years.

96. The Director of Corporate Services suggested that it may be possible to set up a loan scheme for teachers who need financial support to meet the costs of a private rental deposit. This scheme could operate rather like the season ticket loan that is already available to council staff – this provides an interest free loan that is then repaid in ten equal instalments.

97. We recommend that Cabinet consider setting up a rent deposit scheme that would operate in a similar way to the existing season ticket loan. This would provide teachers with an interest free loan that would be paid back to the council in a set number of instalments. (recommendation 14)

98. The Cabinet Member for Regeneration, Environment and Housing drew our attention to the Mayor of London's work to develop a London Living Rent, badged as a new type of affordable housing for middle-income Londoners. The aim is to use monies from the Affordable Homes Funding to build housing that will be offered at a lower than market rate rent for tenancies of a minimum of three years. Tenants will be

supported to build up savings to buy a home either through shared ownership or outright purchase.

99. We recommend that the Sustainable Communities Overview and Scrutiny Panel should receive a briefing on the Mayor of London's London Living Rent initiative in order to identify potential benefits for Merton residents (recommendation 15)

Task Group's Findings - Retention

Training and development

100. The newly qualified teachers who responded to our questionnaire overwhelmingly cited housing as the most important factor in their decision to leave or stay in Merton schools. Other factors were pay and promotion opportunities as well as opportunities for continuous professional development

101. We heard that Merton provides a lot of continued professional development opportunities for teachers, including school based, Merton-specific tailored training and through partnership arrangements with neighbouring boroughs (South London School Effectiveness Partnership) to provide training as well as offering free network meetings.

102. One constraint is that it is increasingly difficult for headteachers to release teachers from school to attend courses. Also, schools have limited funds for continued professional development. There is potential to augment budget through bids for specific funding for training – for example, some of the primary school clusters have employed someone to develop bids for the delivery of specific projects or curriculum activity. Similarly, the Mitcham Town primary school cluster has a longstanding offer for teachers to undertake a locally delivered MA programme in conjunction with a local university.

103. We recommend that the School Effectiveness Partnership Board should consider how best to build on the effective programme of continuous professional development that is already being delivered. The Board could consider the role of local colleges and universities in further enhancing the options available, including through use of the Apprenticeship Levy. (recommendation 16)

Succession planning

104. Responses from primary headteachers to our questionnaire indicated that a strategic approach to succession planning would be helpful in regard to the retention of excellent teachers. A particular area on which headteachers would like to see a focus is on mentoring and training for those who have completed the year following the NQT year.

105. We were assured that, further to the conclusion of the scrutiny task group that reviewed succession planning, the recommendations had been actively taken forward through a number of initiatives including a training programme for those aspiring to become headteachers (taken up by 42 deputy headteachers), targeted training for women and future leaders from black and minority ethnic backgrounds as well as specific discussions with individual schools.

Concluding remarks

106. We are very grateful that so many headteachers and newly qualified teachers took the time to write and/or speak to us. Hearing their experiences and views first hand has been invaluable in helping us to understand the challenges and barriers that they face and to identify measures that may help to address these.

107. We found that good school performance has a positive impact on both recruitment and retention and were therefore encouraged by evidence of sustained improvement in performance in Merton schools and the high proportion of schools that have been rated “good” or “outstanding” by Ofsted. We have recommended that Cabinet continue to celebrate these successes so that this will encourage high quality teachers to apply to work in Merton schools.

108. We found that recruitment has been a particular challenge for headteachers, with the main barriers reported to be national issues (pay, status, workload), lack of candidates and the cost of living in the local area. Retention is a lesser challenge, with a particular pinchpoint when teachers are about three years into their career and at a point when they no longer wish to continue living in short term rented or shared housing.

109. We found that the council already has appropriate systems and structures in place for teacher recruitment. However there is scope for using these more effectively and promoting them more widely to headteachers so that they are fully aware of all available recruitment routes. We have made recommendations to assist with this.

110. We were pleased to find that there is already a wide range of benefits on offer to teachers and have made recommendations to assist with the promotion of these to candidates, teachers and headteachers. We were impressed by information given to us regarding staff health days held in the Civic Centre and have therefore made a recommendation to encourage governing bodies to organise activities that would promote their staff health and wellbeing.

111. We were struck by the impact that the cost of housing locally has on the recruitment and retention of teachers. We have made a number of recommendations that are intended to improve teachers’ experience of the private rented sector, including the proposed introduction of an interest free loan to assist teachers with payment of rent deposits.

112. We are well aware that there are many other groups of key workers and vulnerable groups in Merton who are similarly affected. However, as these groups were not included in our remit, we have confined our recommendations to teachers. We understand that the council’s Cabinet will need to bear these competing demands, wider responsibilities and financial pressures in mind when considering their response to our recommendations.

What happens next?

113. This task group was established by the Council's Overview and Scrutiny Commission and so this report will be presented to its meeting on 25 January 2018 for the Commission's approval.

114. The Commission will then send the report to the Council's Cabinet on 19 February 2018 for initial discussion.

115. Once Cabinet has received the task group report, it will be asked to provide a formal response to the Commission within two months.

116. The Cabinet will be asked to respond to each of the task group's recommendations, setting out whether the recommendation is accepted and how and when it will be implemented. If the Cabinet is unable to support and implement some of the recommendations, then it is expected that clearly stated reasons will be provided for each.

117. The lead Cabinet Member (or officer to whom this work is delegated) should ensure that other organisations to whom recommendations have been directed are contacted and that their response to those recommendations is included in the report.

118. A further report will be sought by the Commission six months after the Cabinet response has been received, giving an update on progress with implementation of the recommendations.

Appendices

Appendix 1: written evidence

Recruitment and retention of teachers – the national picture – powerpoint presentation, Jane McSherry, Assistant Director of Education, 23 October 2017
Recruitment and retention of teachers, House of Commons Education Committee, Fifth Report of Session 2016-17
State of Education Survey Report 2016
Questionnaires received from 6 primary headteachers and 3 secondary headteachers in Merton
Questionnaires received from 35 newly qualified teachers (NQTs) working in Merton schools

Appendix 2: list of oral evidence

Jane McSherry, Assistant Director of Education, 23 October, 13 November, 11 December 2017 and 4 January 2018
Ewan Morrison, School Improvement Adviser – Professional Development, 13 November 2017
Kim Brown, Head of Organisational Development and HR Strategy, 1 December 2017
Steve Langley, Head of Housing Needs and Strategy, 11 December 2017
Paul McGarry, Head of Future Merton, 11 December 2017
Yvette Stanley, Director of Children Schools and Families, 4 January 2018
Councillor Caroline Cooper-Marbiah, Cabinet Member for Education, 4 January 2018
Caroline Holland, Director of Corporate Services, 4 January 2018
Councillor Martin Whelton, Cabinet Member for Regeneration, Environment and Housing, 4 January 2018

Discussion with secondary school headteachers, Chaucer Centre, 21 November 2017, Councillors Agatha Akyigyina and Joan Henry

Discussion with primary school headteachers, Chaucer Centre, 28 November 2017, Councillors Agatha Akyigyina, Joan Henry and peter Southgate

Committee: Cabinet

Date: 25 June 2018

Wards: All

Subject: Willow Lane Business Improvement District Renewal Ballot

Lead officer: Chris Lee, Director of Environment and Regeneration

Lead member: Councillor Martin Whelton, Cabinet Member for Regeneration, housing and Transport

Forward Plan reference number:

Contact officer: Sara Williams, FutureMerton, Programme Manager for Business and Economy

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That the Leaders Strategy Group note

A. That the Willow Lane Business Improvement District (BID) proposal for renewal of the BID ballot is supported and any future decision on the BID renewal is delegated to Chris Lee, Director of Environment and Regeneration in consultation with the Cabinet Member Councillor Martin Whelton.

B. That the Council will charge the Willow Lane BID Board for the costs for business rates staff in collecting and administrating the levy.

C. That the Council recover the cost of the BID renewal ballot from the proposers if the renewal ballot is unsuccessful.

D. That the Council will vote in support of the BID renewal for its own rated properties in the BID area and that the voter will be Chris Lee, director of Environment and Regeneration.

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1 PURPOSE OF REPORT AND EXECUTIVE SUMMARY

1.1. This report outlines the proposal to support the renewal of the Willow Lane industrial Estate Business Improvement District (BID). It outlines the BID proposal and identifies the timetable for the renewal ballot.

1.2. It also identifies the Council's role in the proposed BID and the costs the Council will incur should the BID be successful.

2 DETAILS

2.1. A BID is a legal body which can come into being, following a successful ballot in which all eligible businesses have a vote on proposals to improve the district.

2.2. A BID is a not for profit company set up by businesses in an area to improve the area. It is directed and funded by businesses to make improvements to the trading environment.

2.3. Provision of the business rate listing in a potential BID area free of charge.

2.4. Recovery of the costs if the BID is unsuccessful (if it is successful the council is obliged to pay the cost of the ballot) estimated at £800 for each BID area to be contained within the FutureMerton team.

2.5. The cost of collecting and full recovery of the BID levy by LBM is 3% of the total amount of BID levy collected in each year of the BID term to cover the costs to the Council of administering these arrangements. and is paid for by Willow Lane BID.

2.6. Provision of on-going in-kind support for a successful BID renewal to be contained within FutureMerton team.

2.7. Willow Lane started a 5 year term after a YES ballot of its businesses in 2009. A renewal ballot took place in February/March 2014. Following the last success the Business Improvement District (BID) will be holding its second renewal ballot in 2019 to ask the businesses on the industrial estate if they would like Willow Lane to continue it's good work and vote for a third term.

2.8. This renewal process is a requirement of all BIDs and the businesses will decide through a democratic process whether they wish to continue to have a BID and therefore fund the activities or not. The vote is a simple yes/no – this is not a competitive ballot with other companies involved.

2.9. Over the next few months Willow Lane BID will be undertaking a consultation with businesses and preparing a BID renewal proposal for 2019 – 2024. A full consultation will be undertaken with businesses on the estate between June-September 2018 regarding their priorities for services. The intention of the Willow Lane BID Board is that the priority for BID3 should be the continued provision of existing high-quality services. The major addition to this will be extended CCTV coverage across the estate along with the next stage of the Wayfinding project (new signage and coloured banners). Current services include:

- CCTV and APNR coverage and monitoring
- Joined up working with the local Police team
- Regular review and improvements to local parking and access arrangements
- Business website
- Estate Coordinator and Board to actively manage and monitor the area
- Maintenance of estate signage
- Enabling faster broadband

2.10. Discussions will be held with all the relevant Council departments to maximise partnership opportunity wherever possible. LBM will work with Willow Lane for a successful outcome of this ballot.

2.11. The proposed boundary for Willow Lane BID was defined by the Willow Lane Board and this includes approximately 180 eligible businesses.

2.12. The Willow Lane BID currently collects approximately £65,000 per annum through the BID levy. The BID propose to introduce a banding system going forward. The BID will be consulting with its larger members about the potential introduction of a higher levy band for the largest businesses on the estate.

Rateable Value (as at Sept 2013)	Annual BID Levy
£5,000 - £10,000	£108
£10,0001 - £30,000	£270
£30,001 - £ 50,000	£378
£50,001 - £100,000	£540
Over £100,000	£756

2.13. From the levy collected there will be a need to deduct the costs of administration and management of the BID, and a sum for overheads. The costs will be included in the annual accounts and will be a responsibility of the Board to keep this to a minimum.

2.14. There are no Council hereditaments that would be eligible to pay the annual BID levy should the ballot be successful.

3 ALTERNATIVE OPTIONS

3.1. The Council could decide that the potential benefits from the existing Willow Lane BID are not sufficiently great to justify the provision of the financial resource identified and the input of officer time. The alternative is to not renew the ballot. It should be noted that the Council can only oppose a BID Proposal on the grounds that it conflicts with Council Policy.

4 CONSULTATION UNDERTAKEN OR PROPOSED

4.1. A renewal ballot will be required to invite all of the eligible businesses within the BID area to vote for or against the renewal proposal.

4.2. For a BID renewal to be successful it must be won on two counts:

4.2.1 A straight majority by the number of those voting

4.2.2 By a majority in the rateable value of those voting

5 TIMETABLE

5.1 The proposal is to carry out a renewal ballot in February and March 2019 and if successful then operations will continue for a further 5 years from 1st July 2019 to 30th June 2024. The Council will be required to collect the BID levy payments. This will be done 1st July of each year.

5.2 The ballot timetable is currently suggested as follows:

25th May 2018:	Meet with Electoral Services to confirm details notice of ballot
ASAP:	Send final renewal BID proposal to billing authority
ASAP:	Publication of notice of ballot (42 days before ballot date)
27th Feb 2019:	Issuing of ballot papers (28 days before ballot date)
18th March 2019:	Deadline for applications for proxy votes
28th March 2019:	**Ballot date**
29th March 2019:	The ballot result will be announced
1st July 2019:	Willow Lane BID third BID term commences

6 FINANCIAL, RESOURCE AND PROPERTY IMPLICATIONS

6.1 The development of the BID is supported by the council in the provision of services to support the renewal ballot.

6.2 Willow Lane will produce annual accounts for each financial year and these will be available to all the BID levy payers and the council. The BID board will decide how any unspent or additional income should be utilised.

7 LEGAL AND STATUTORY IMPLICATIONS

7.1 The legislative framework for the establishment of Business Improvement Districts is contained in the Local Government Act 2003 with the regulations governing the BID development process and Statutory Instrument No. 2443-The Business Improvement Districts (England) Regulations 2004.

7.2 Willow Lane will refresh its baseline agreements with the London Borough of Merton to ensure that improvements and services carried out by the BID

represent true additionality and will not replace services already performed by the council. The agreement will clearly define the level of provision by the council and ensure our commitment to maintaining and improving the level of service during the BID.

7.3 Where council services are outsourced i.e. Veolia and idVerde, reference should be made in their contractual Operating Procedures to maintain good working relationships with the BID.

8 HUMAN RIGHTS, EQUALITIES AND COMMUNITY COHESION IMPLICATIONS

8.1. There are no direct implications arising from this report.

9 CRIME AND DISORDER IMPLICATIONS

9.1. There are no direct implications arising from this report.

10 RISK MANAGEMENT AND HEALTH AND SAFETY IMPLICATIONS

10.1 Lack of support of the BID by the Local Authority could lead to some resentment from local businesses and possibly the view that the council was not supportive of local business. The majority in the 2012 ballot was strong with 70% of businesses that voted confirming their support. It is anticipated this will increase in this ballot.

11 APPENDICES – THE FOLLOWING DOCUMENTS ARE TO BE PUBLISHED WITH THIS REPORT AND FORM PART OF THE REPORT

11.1 Appendix 1 - Willow Lane BID map

12 BACKGROUND PAPERS

12.1. None

13 LINKED DOCUMENTS

13.1 Cabinet report dated 8th December 2008 agenda item 6 entitled Business Improvement Districts found here: https://democracy.merton.gov.uk/Data/Cabinet/20081208/Agenda/686.pdf

Author: Sara Williams, FutureMerton, Programme Manager Business and Economy, Tel: 020 8545 3066 Email:sara.williams@merton.gov.uk

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willowlane
THE PLACE FOR BUSINESS

Willow Lane, Mitcham, Surrey CR4 4NA
www.willowlane.org.uk

Estate Map

Public Transport

By Tram
Mitcham Junction Station
Approximately 5-10 minutes walk. *For information on train operators and times phone National Rail Enquiries on 0845 7484950.*

By Rail
Mitcham Junction Station
Approximately 5-10 minutes walk.

By Air
Gatwick Airport
Approximately 35 minutes drive away.
Heathrow Airport
Approximately 45 minutes drive away.

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Committee: Cabinet

Date: 25th June 2018

Wards: All

Subject: Consultation on sustainable drainage supplementary planning document

Lead officer: Director for Environment and Regeneration Chris Lee

Lead member: Cabinet Member for Regeneration, Environment and Housing, Councillor Martin Whelton.

Contact officer: Future Merton Planning Officer, Ann Maria Clarke

Recommendations:

A. That Cabinet resolves to approve a six week consultation on the *Sustainable Drainage Design and Evaluation Supplementary Planning Document* (SPD).

---

1. Purpose of report and executive summary

1.1 Merton Council and 15 other local authorities across England have worked with Robert Bray Associates and McCloy Consulting to produce a Sustainable Drainage Guide. The guide provides a new approach to the design and evaluation of SuDS with easy to understand and practical information for all those involved with the development process.

1.2 This report seeks Cabinet's approval for six weeks public consultation for the Sustainable Drainage (SuDS) *Design and Evaluation Supplementary Planning Document (SPD).* The draft SPD is attached as Appendix 1.

2. Details

2.1 In 2010 the Flood and Water Management Act proposed that sustainable drainage measures (knowns as SuDS) should be used on developments to control at manage flooding. This was confirmed by Defra in March 2015 through implementation of the 'non statutory technical standards' for SuDS and this made Lead Local Flood Authorities statutory consultees in the planning process.

2.2 Local Planning Authorities such as Merton Council have responsibility for ensuring that SuDS are designed and implemented to a satisfactory standard. Therefore SuDS designers and engineers will need to meet these required standards when submitting a planning application to Merton.

Role of the Sustainable Drainage (SuDS) SPD

2.3 The SPD is not introducing new planning policy, but provides guidance on the implementation of Merton's adopted Local Plan polices Sites and Policies Plan policy: *DM F2 Sustainable urban drainage systems (SUDS) and; wastewater and water infrastructure.* Merton's Local Plan: https://www2.merton.gov.uk/merton_sites_and_policies__part_1_policies_jul14.pdf

2.4 The SPD follows the sustainable drainage design process from concept, through outline, to detailed design and provides an easy to follow, step by step, process; including chapters on the following:

- The role of SuDS
- The SuDS design and evaluation process (cover for example the role of planning, objectives of the evaluation process)
- Local SuDS requirements – covers planning policy requirements
- Concept Design
- Outline Design
- Detailed Design – covering topics such as water quality, amenity. Biodiversity, Planting for SuDS and Managing SuDS.

2.5 The SPD is in conformity with statutory requirements such as the National Planning Policy Framework (NPPF), Merton's Local Plan; as well as CIRIA's 2015 SuDS Manual and other recognised guidance.

2.6 The guidance also provides case studies and example of SuDS and demonstrates that SuDS are affordable and can be incorporated with in design.

3. Alternative options

3.1 The alternative option would be to not to consult on or progress with a SuDS SPD. This alternative option is not recommended as it would not help to reduce flood risk in Merton.

4. Consultation undertaken or proposed

4.1 Should Cabinet approve this report, a six week public consultation later in 2018 and exact dates to be agreed.

5. Timetable

5.1 Following consideration of the consultation results the Sustainable Drainage SPD would be recommended to Cabinet for adoption later in 2018.

6. Financial, resource and property implications

6.1 It is envisaged that the commitment to the completion of the SuDS SPD can be achieved through existing financial and staffing resources.

7. Legal and statutory implications

7.1 This SPD has been produced under the Town and Country Planning (Local Planning) (England) Regulations 2012.

8. Human rights, equalities and community cohesion implications

8.1 No implications. The SPD has also been subject to a Strategic Environment Assessment (SEA) screening. The council is statutory required to consult with three government advisor bodies namely the Environment Agency, Historic England and Natural England, none of whom have objected to the SEA screening

9. Risk management and health and safety implications

9.1 Should it be adopted following consultation, the sustainable drainage SPD will help to manage flood risk, particularly from surface water, in Merton

10. Appendices – the following documents are to be published with this report and form part of the report

10.1 Appendix A: *Sustainable Drainage Design and Evaluation Supplementary Planning Document* *https://www.merton.gov.uk/streets-parking-transport/streets-and-pavements/surface-water-drainage-and-suds*

11. Background Papers – the following documents have been relied on in drawing up this report but do not form part of the report

- NPPF 2012 (Draft NPPF 2018)
- Mayor's London Plan
- Merton's Sites and Policies Plan 2014
- Merton's Core Planning Strategy 2011

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Sustainable Drainage

Design & Evaluation Guide

merton

Preface

Why this guide is needed

Our understanding of the negative impacts of conventional drainage are now well understood.

Pipe drainage collects and conveys water away from where it rains, as quickly as possible, contributing to increased risk of flooding, likelihood of contaminated water and the loss of our relationship with water and the benefits it can bring to us all.

Sustainable Drainage, or SuDS, is a way of managing rainfall that mimics the drainage processes found in nature and addresses the issues with conventional drainage.

Who this guide is intended for

In 2010 the Flood and Water Management Act proposed that SuDS should be used on most development and this was confirmed in a ministerial statement on 23 March 2015 introducing the 'non statutory technical standards' for SuDS.

The responsibility for ensuring that SuDS are designed and implemented to a satisfactory standard lies with the Local Planning Authority (LPA).

SuDS Designers will need to meet these required standards when submitting proposals to the LPA.

What the guide provides

This guide links the design of SuDS with the evaluation requirements of planning in a sequence that mirrors the SuDS design process.

This guide promotes the idea of integrating SuDS into the fabric of development using the available landscape spaces as well as the construction profile of buildings. This approach provides more interesting surroundings, cost benefits, and simplified future maintenance.

This guide begins by giving a background context for SuDS design. Next, the three accepted design stages are described: Concept Design, Outline Design and Detail Design. Subsequent chapters offer supporting information.

It is intended that this guide will facilitate consultation, in order to achieve the best possible SuDS designs.

Contents

London Borough of Merton SuDS D & E Guide

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McCloy Consulting

Robert Bray Associates
Sustainable Drainage Consultants
Landscape Architects

Anthony McCloy *Director McCloy Consulting*

Anthony McCloy is a Chartered Engineer working exclusively in the water sector since 1998. Since 2003 he has focused on SuDS design, hydraulic modelling for SuDS and flood risk. He has co-authored SuDS Guidance documents for Planning Authorities and is a key tutor for the (CIRIA) National SuDS training workshops since 2006.

Bob Bray *Director Robert Bray Associates*

Robert Bray has been a pioneer of UK SuDS since 1996. He has been at the forefront of demonstrating how SuDS can be fully integrated with the surrounding landscape. Bob has been a key tutor for the (CIRIA) National SuDS training workshops since 2003.

Kevin Barton *Director Robert Bray Associates*

Kevin Barton has been working as a Landscape Architect for over 20 years and designing SuDS landscapes exclusively since 2011. In addition to project work, Kevin has also contributed to SuDS Guidance documents for Planning Authorities and presented on SuDS topics at Conferences, CIRIA 'Susdrain' events and to Planning Authorities.

Acknowledgements

Kevin Tidy - LLFA (retired)

Ruth Newton - Planner

This development guide has the support of 16 Local Authorities across England. The project partners have contributed both financially and informatively through facilitated workshops to the development of the guide.

Project Partners

- Lewisham Council
- Lincolnshire County Council
- London Borough of Bexley
- London Borough of Enfield
- London Borough of Hackney
- London Borough of Hammersmith and Fulham
- London Borough of Haringey
- London Borough of Hillingdon
- London Borough of Merton
- Luton Borough Council
- Oxford City Council
- Oxfordshire County Council
- Peterborough City Council
- Royal Borough of Kensington and Chelsea
- Worcestershire County Council
- North Worcestershire Water Management Districts:
  - Wyre Forest District Council
  - Bromsgrove District Council
  - Redditch Borough Council

London Borough of Merton SuDS D & E Guide

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1.0 Introduction

Since 2000 there have been an increasing number of publications that identify the problems with traditional drainage and describe a different approach to managing rainfall called Sustainable Drainage Systems or SuDS.

1.1 The origins of SuDS

The industrialisation of the UK and the extensive use of pipes to collect and convey runoff to streams and rivers has created a legacy of flooding and pollution.

Pipe systems are at capacity, or surcharge in heavy rain, washing everyday contamination from hard surfaces directly into our watercourses.

During the 1990s an awareness of better ways to manage rainfall began to influence thinking in Britain.

Ideas from the US and Sweden were initially introduced in Scotland, to deal with runoff from a large new development in Dunfermline. Most of the concepts and terms commonly used in Sustainable Drainage Systems (SuDS) were introduced to Britain at this time.

Examples from the USA such as the Oregon Water Science Centre inspired the uptake of SuDS within the UK.

1.2 SuDS today

There have been a number of definitions of Sustainable Drainage over the years, but the following is based on the SuDS Manual 2015, which was published by the Construction Industry Research and Information Association (CIRIA):

SuDS became a statutory requirement on all major developments in 2015. This means that SuDS proposals are now required as part of the planning process.

Planning authorities can also ask for SuDS on other types of development, including smaller developments and regeneration projects.

'Sustainable Drainage or SuDS is a way of managing rainfall that minimises the negative impacts on the quantity and quality of runoff whilst maximising the benefits of amenity and biodiversity for people and the environment'.

One of the earliest examples of SuDS in the UK can be found at Dunfermline, Scotland.

1.3 Background to this document

A number of SuDS guides have been produced in the UK since 2000, many of which outline the benefits of SuDS, but fail to provide sufficient insight into how design should be approached with SuDS in mind, and with little guidance on the evaluation process for developments. This guide considers design and evaluation of SuDS as complementary. It explains both, from the earliest iteration of Concept Design through to the Detailing stage, in order to successfully integrate SuDS into development.

The main objectives of this Design and Evaluation guide are:

- To create a shared vision around SuDS for all involved in design and evaluation.
- To enable the design and evaluation of SuDS to meet agreed standards.
- To ensure SuDS are maintainable now and in the future.

This guide is complementary to:

- The National Planning Policy Framework (NPPF)
- Relevant Local Planning Policy
- Construction Industry Research and Information Association (CIRIA) 2015 SuDS Manual (C753)
- SuDS Non-Statutory Technical Standards (NSTS)
- Local Authority SuDS Officer Organisation (LASOO) NSTS Practice Guidance

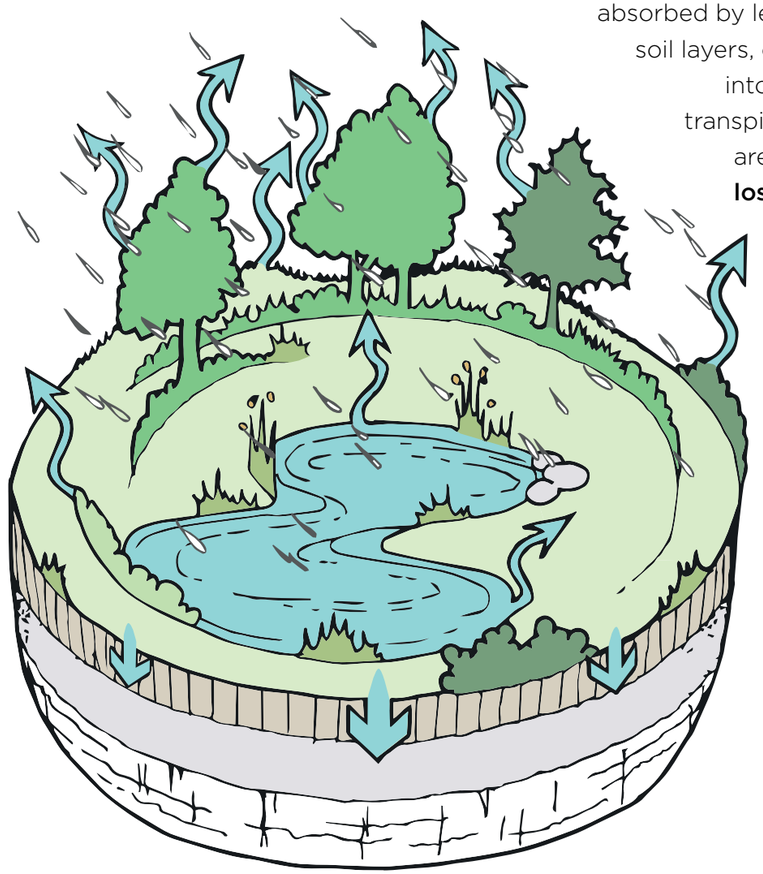
This guide draws upon the experience of the authoring team, which has been gained over 20 years of practical SuDS application.

2.0 Understanding Rainfall

It is important that everyone involved in the design and evaluation of SuDS has an understanding of the natural processes that occur in response to rain, so that proposed schemes can mimic these.

2.1 It begins to rain

In forests, glades, and wetlands, when it rains, water can be lost in a number of ways. The rain is held on the foliage of trees and plants and evaporates into the air, falls to the ground to be absorbed by leaf litter and surface soil layers, or is 'breathed' back into the air by plants as transpiration. These losses are called **interception losses** and are the first part of the natural losses that occur during rainfall.



Interception losses in the natural landscape.

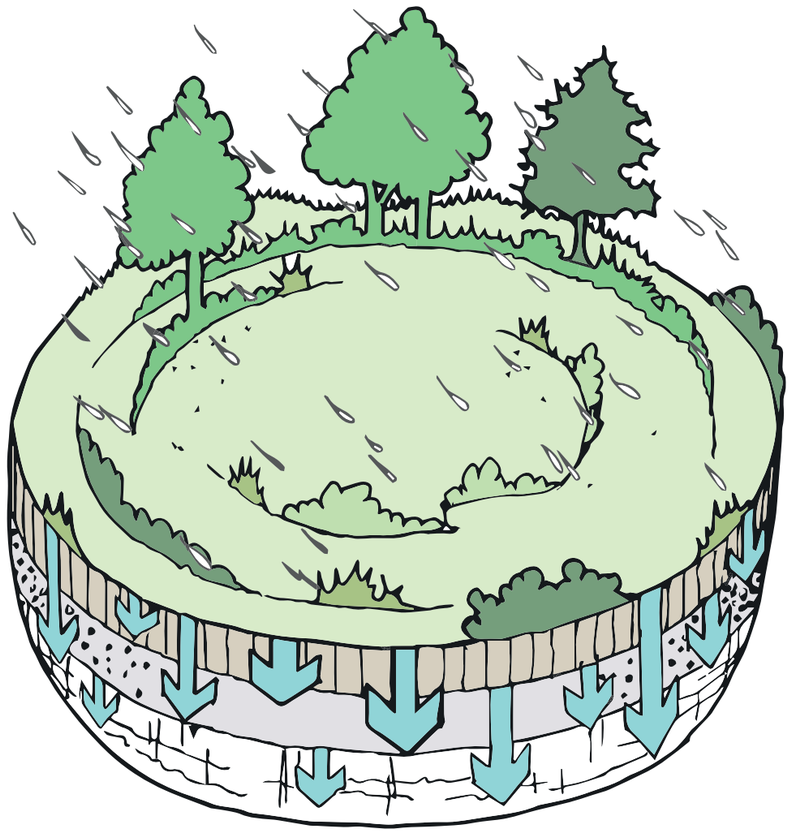
2.2 The ground becomes saturated

After a while the surface of the landscape can absorb no more water.

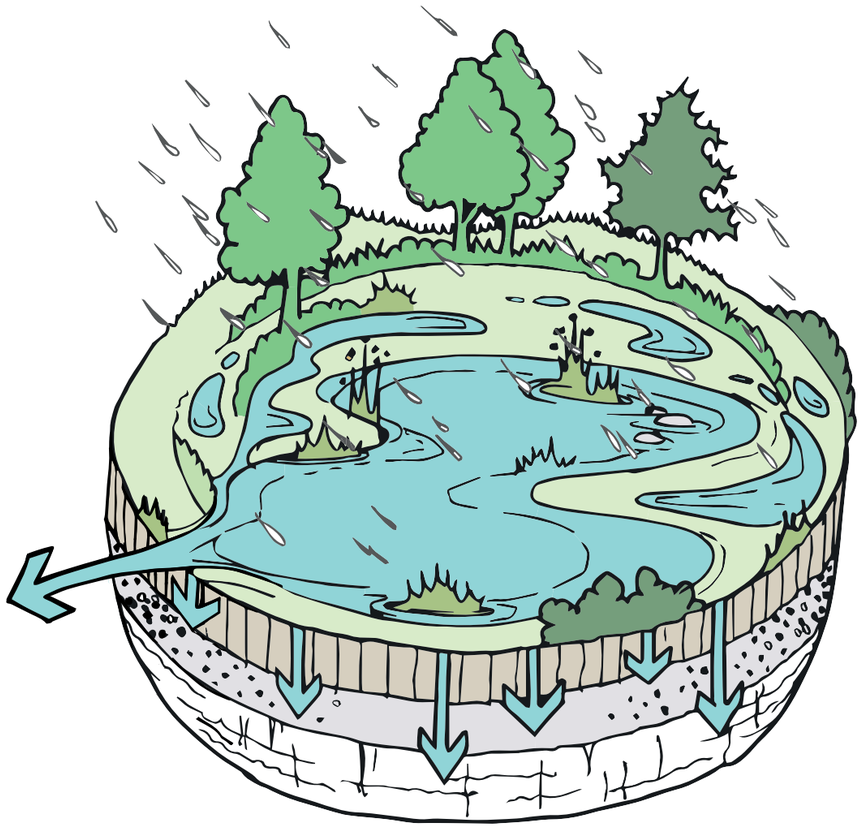
Where the ground is **permeable**, water begins to soak into lower soil profiles and then the underlying geology. This is called **infiltration** and is common on sandy, gravelly and limestone soils.

Where the ground is **impermeable,** water begins to trickle and flow across the surface, collects in natural depressions, and is stored in wetlands. These natural features attenuate the rate and volume of flow of rainwater running off the landscape. These flows are called **natural** or **greenfield runoff**.

In landscapes with infiltrating soils, after interception losses have taken place, most rainwater is lost by soaking into the ground.



Surface flow rates are small at first, but increase with higher **intensity** *rainfall events. The* **volume** *of runoff will generally be greater with increased rainfall intensity and duration.*



2.3 Natural losses continue during heavy rain

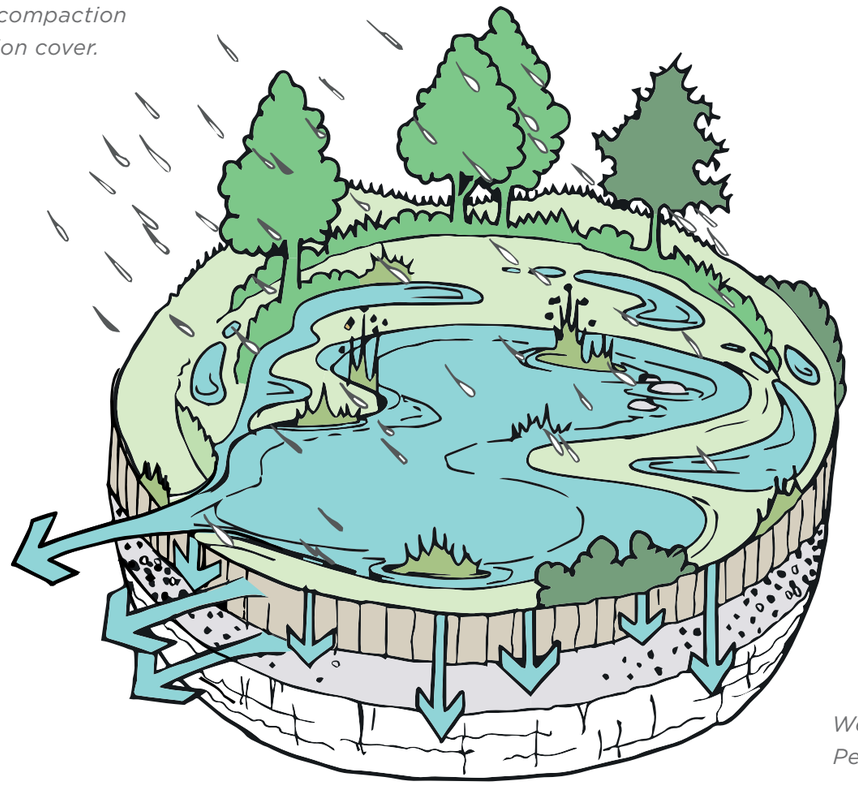
In many soils, both a degree of infiltration and surface runoff can occur simultaneously.

Once the ground is saturated there are ongoing natural losses that occur during rainfall, particularly where the ground has some permeability.

During warmer weather when the ground is relatively dry, interception and ongoing natural losses will occur during most rainfall events.

Interception and **ongoing losses** are the two elements of **total natural losses**.

This dynamic process varies in accordance with permeability, the preceding weather conditions and extent of ground compaction or vegetation cover.



Facing Page: Wet Woodland, Pembrokeshire.

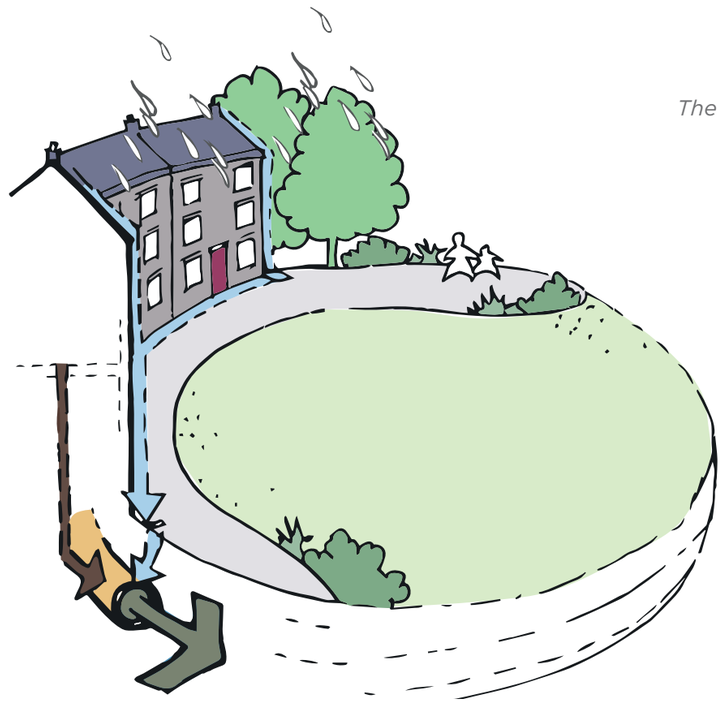
3.0 The Impact of Development

For millennia, people have been making changes to our landscapes which affect the fate of the rain that falls on the land. In recent history, the scale of urbanisation and our attitudes toward rainwater have caused serious problems both for ourselves and for the natural environment.

3.1 A rural landscape becomes urban

Before the universal use of piped drainage it was common to collect and convey runoff across the land surface directly into ditches, streams and local rivers.

With the growth of Victorian cities and the development of piped drainage, human and industrial waste, together with rainwater runoff from buildings and streets, was directed into a single underground pipe called the **combined sewer.** In periods of heavy rainfall, **combined sewer overflows** act as a relief valve when flows exceed sewer capacity, discharging untreated foul sewage into local watercourses. Many British cities and towns of Victorian age are served by combined sewers.

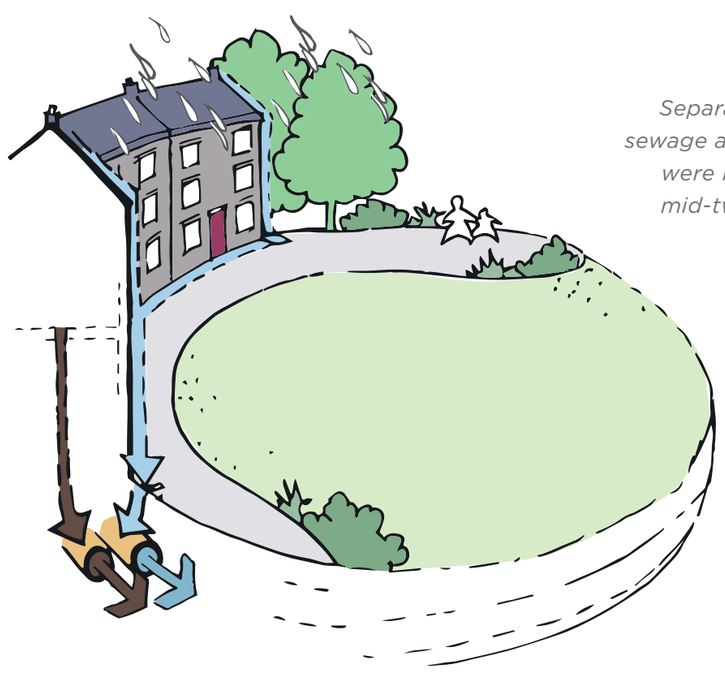


The Combined Sewer.

3.2 Separating rainwater from foul sewage

In the mid-twentieth century it was realised that foul sewage and storm water should be separated. A separate sewer arrangement was introduced with the **foul sewer** for human waste and the **surface water sewer** for rainfall. However, in many urban areas these connections are still unclear and are complicated by highway drainage and other ad hoc arrangements.

Unfortunately, rainwater still gets into the foul sewer and misconnections contaminate surface water sewers and receiving watercourses. The SuDS approach to managing rainfall can minimise these misconnections by keeping runoff at or near the surface.



Separate pipes for foul sewage and surface water were introduced in the mid-twentieth century.

3.3 Consequences of piped drainage

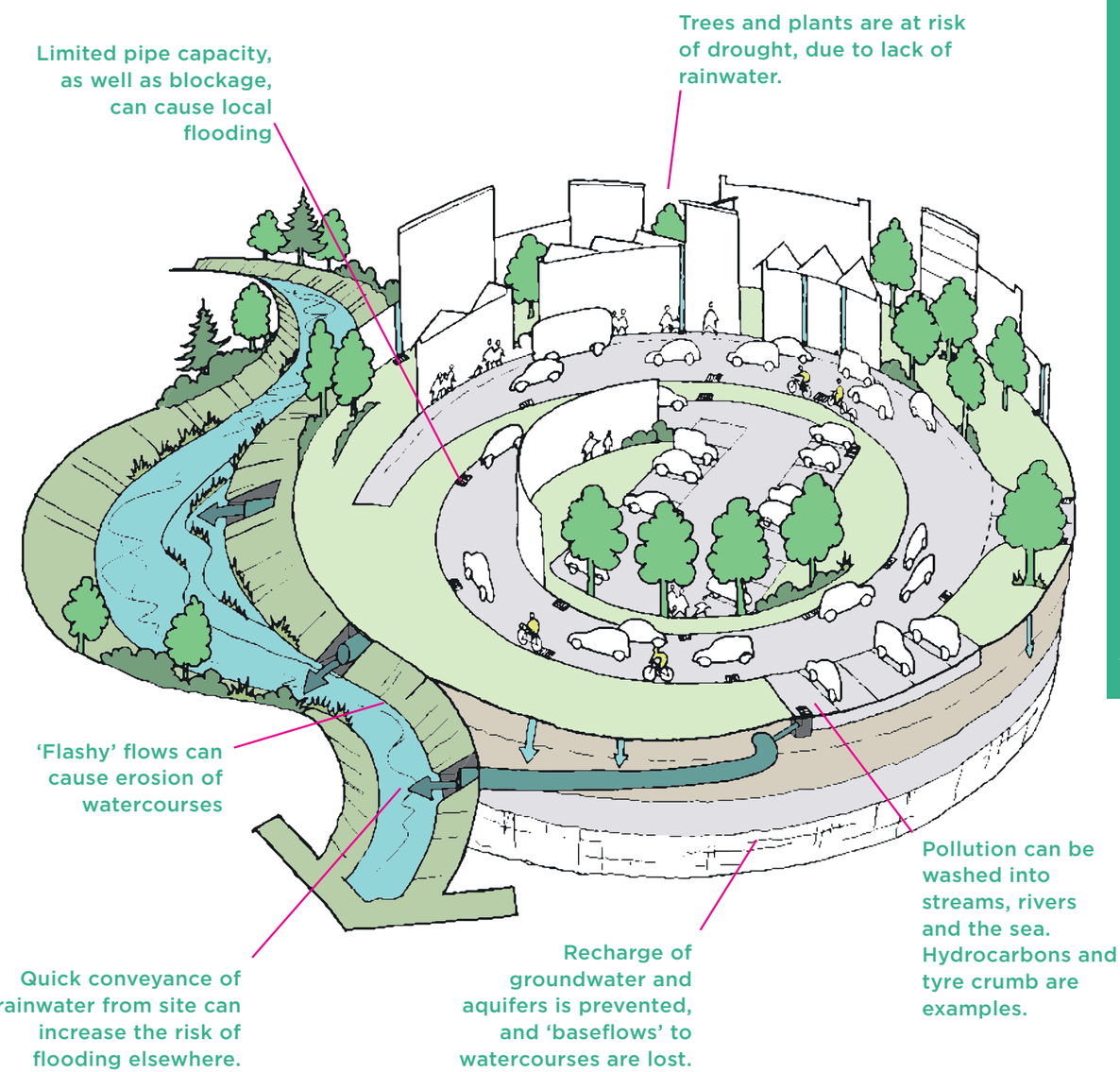
Piped drainage is designed to convey water away from developments as quickly as possible, and has become the default way to manage rainfall across the developed world. However, this is at a cost to the environment and developments themselves.

The disadvantages of traditional piped drainage are now becoming clear:

- Quickly carrying rainwater away from where it falls can increase the risk of flooding elsewhere.
- Limited pipe and network capacity, as well as blockage, can cause local flooding as water cannot get into the system.
- Pollution from roofs, roads and car parks is washed into the sewer when it rains, contaminating streams, rivers and the sea and killing wildlife.
- Recharge of groundwater and aquifers is prevented, and the natural 'baseflow' of water through the ground to watercourses is lost.
- 'Flashy' flows from urban areas can cause erosion of watercourses.
- Trees and plants in urban areas are at greater risk from drought stress, due to lack of access to rainwater.
- Wildlife is often trapped and killed by conventional drainage structures.

Foul water misconnections to surface water pipes result in polluted waterways at Glenbrook, Enfield where sewage fungus is evident.

Pollution from roads and car parks is often visible - fuels, oil, heavy metals, tyre dust and silt all get washed into drainage systems.



Conventional drainage results in high rates and increased amounts of runoff reaching streams and rivers. Pollution from urban surfaces is also washed into watercourses.

4.0 The Role of SuDS

Sustainable Drainage is a way of managing rainfall that mimics natural drainage processes and reduces the impact of development on communities and the environment.

4.1 SuDS addresses community and environmental problems

Conventional drainage seeks to remove runoff from development as quickly as possible. In contrast, SuDS slow the flow and store water in both hard and soft landscape areas, thereby reducing the impact of large volumes of polluted water flowing from development.

SuDS uses components linked in series to trap silt and heavy pollution 'at source'.

Contaminants are broken down naturally as runoff passes from one SuDS component to the next.

Multi-functional SuDS components that manage water at or near the surface, can bring significant community benefits, adapting their function to the weather.

The loss of aquatic habitat is reversed when using the SuDS approach. It allows fauna and flora to flourish, and to connect with existing habitats.

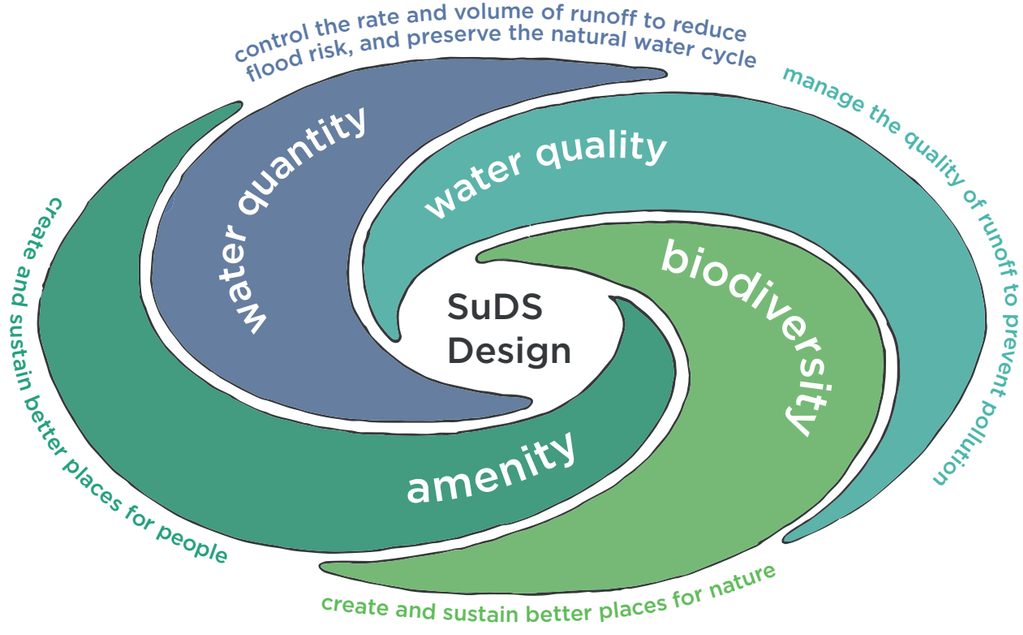
A wildlife area at Robinswood Primary School, Gloucestershire, manages rainfall as well as providing amenity and biodiversity benefits to the school.

4.2 SuDS objectives

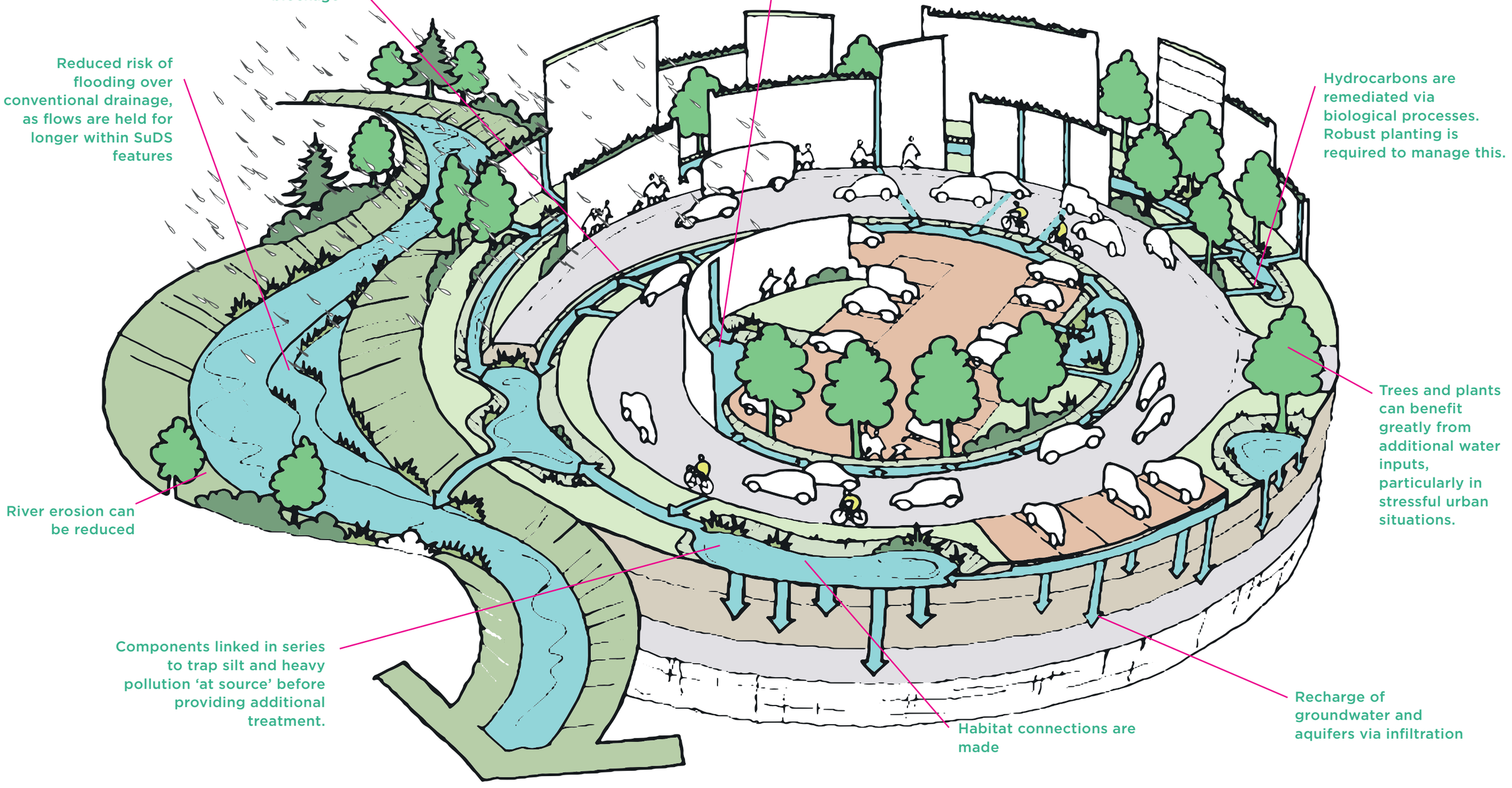
Where SuDS are designed as an integral part of the urban fabric they will help mitigate the contribution to flooding and the impact that development has on the natural landscape. They are also able to rehabilitate the hydrology of the urban environment through sustainable re-development and SuDS retrofit.

There are four critical objectives that SuDS seek to meet:

- **Quantity**: managing flows and volumes to match the rainfall characteristics before development, in order to prevent flooding from outside the development, within the site and downstream of the development.
- **Amenity**: enhancing people's quality of life through an integrated design that provides useful and attractive multi-functional spaces.
- **Quality**: preventing and treating pollution to ensure that clean water is available as soon as possible to provide amenity and biodiversity benefits within the development, as well as protecting watercourses, groundwater and the sea.
- **Biodiversity**: maximising the potential for wildlife through design and management of SuDS.



SuDS schemes offer diverse benefits over conventional drainage.



5.0 The SuDS Design & Evaluation Process

Integrating SuDS into development is a planning-led activity. Planning permission is required for all new development and re-development, and usually for SuDS retrofit.

5.1 The role of planning in SuDS

The Ministerial Statement of December 2014 gave responsibility for evaluating SuDS within planning applications to Local Planning Authorities (LPAs).

SuDS designs should conform to DEFRA's Non-Statutory Technical Standards (NSTS) for sustainable drainage systems and Local Authority requirements.

The LPA considers that SuDS is appropriate and reasonably practicable in most developments.

The evaluation process is led by the LPA. The LPA will consult with statutory consultees including the Lead Local Flood Authority (LLFA), and other professionals within disciplines complementary to SuDS design.

Consultation with the LPA evaluation team during the design process will help developers and SuDS designers deliver successful and cost-effective SuDS projects.

5.2 Design and evaluation in parallel

This guide considers the design and evaluation of SuDS as complementary. It follows the process of design from the earliest consideration of potential development through to Detail Design. It should involve both the developer and designer together with the planner, LLFA and all other parties with an interest in delivering integrated SuDS design.

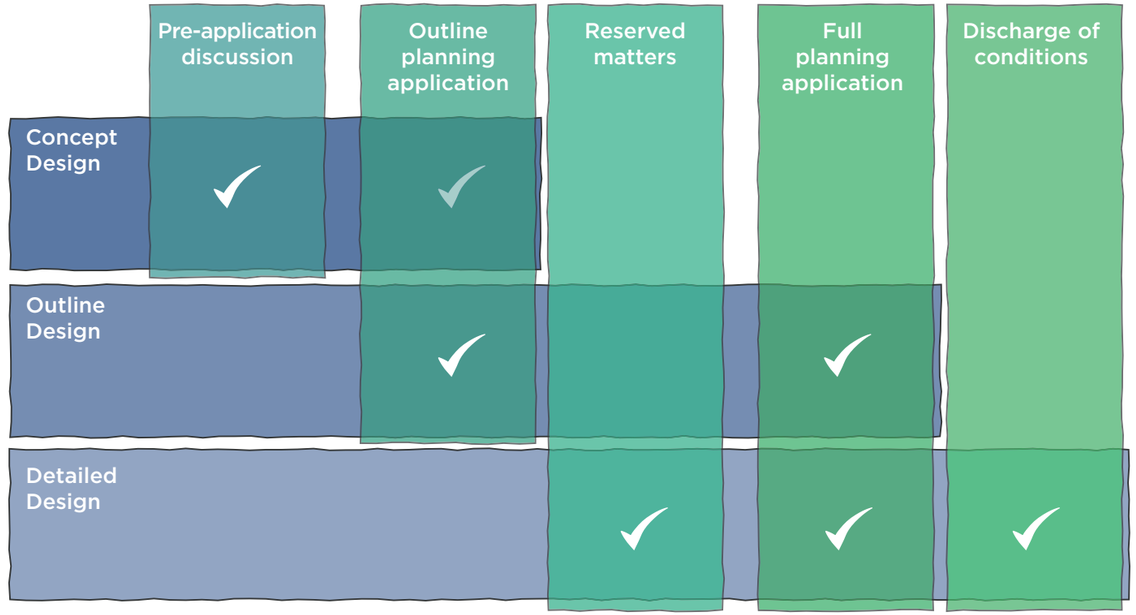
The separate design stages and requirements for evaluation are set out in the guide for both small and large developments, with advice on how these design criteria can be met by SuDS designers, and checked by the evaluation team.

National Planning Policy Framework
www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

Non-statutory technical standards

www.gov.uk/search?q=sustainable+drainage+systems

The design stages and where they are appropriate within planning stages



The extent of information required at each planning stage will be stipulated by the LPA. This may vary on a case by case basis dependant on the complexity and sensitivity of the scheme.

Where a developer would like to minimise the number of conditions for SuDS, to avoid time delays between planning approval and commencement, a detailed SuDS design should accompany the detailed planning application.

In all cases a concept design would be anticipated for pre-application discussion and detailed design will be required for discharge of conditions.

Refer to LASOO Practice Guidance for SuDS pg4 for an Illustrative Planning process
www.susdrain.org/files/resources/other-guidance/lasoo_non_statutory_suds_technical_standards_guidance_2016_.pdf

Design Note:

Ideally the developer and designer will liaise with the Planning Authority throughout the design process to ensure that the scheme is mutually acceptable. If design criteria are not met or are compromised during the design process this may result in significant redesign at a later stage to meet the design criteria set out in this guidance document.

5.3 The objectives of the evaluation process

Throughout the various design stages the emerging designs should be evaluated against core design criteria relating to the four main objectives of SuDS design: quantity, quality, amenity and biodiversity.

The objectives of the evaluation process are to ensure that SuDS:

- meet mandatory (NSTS) and LPA requirements for water quantity and quality, amenity and biodiversity
- maximise opportunities for multi-functionality and amenity uses
- enhance biodiversity throughout the development
- integrate into the development's layout and design
- are appropriate, cost-effective and robust
- are practical to maintain in the long term.

5.4 SuDS design is considered at the beginning

In the past, drainage was usually considered at the end of the design process, with a piped drainage solution superimposed onto a site layout. In many respects the pipe infrastructure was independent of the topography, geology and other hydraulic and environmental characteristics of the site.

Sustainable drainage, however, must be integrated into the site design. It should reflect the topography, geology and drainage characteristics of the site together with the character of the landscape.

SuDS Concept Design ensures that SuDS can influence the layout of the development and is a key part of pre-application discussions.

A wetland at Fort Royal Primary School, Worcestershire, enhances biodiversity within the school grounds.

5.5 SuDS design is evaluated at each subsequent design stage

All aspects of SuDS design should be evaluated at each design stage.

The management of flows and volumes and the location of attenuation storage should be indicated to an appropriate level at the Concept, Outline and final Detail Design stages.

Similarly, the design will demonstrate the use of appropriate source control measures, conveyance and other SuDS components and how these are arranged in a management train with discreet sub-catchments.

The basic requirements of amenity and biodiversity must be demonstrated at each design stage.

Health and safety must be considered at each design stage, with confirmation that this has been achieved through the 'safety by design' principle (see section 8.5).

In the same way, effective, safe and cost-effective maintenance of the SuDS scheme will be ensured through careful design at every stage.

Design Note:

As SuDS components don't manage water most of the time, avoid colouring them blue on plan. Blue is best used for denoting permanent water bodies, like ponds and wetlands.

The 'swale maze' at Redhill School is usable as a play and education space when it's not raining and even in small rainfall events.

6.0 Local SuDS requirements for Merton

Landscape Character

The London Borough of Merton is located in the south west of Greater London and covers an area of approximately 37km2. The main urban centres within Merton are Wimbledon, Raynes Park, Colliers Wood, Morden and Mitcham, which are comprised of mostly commercial and residential land uses.

The majority of the Borough is low lying except the area in the north west, namely Wimbledon and Wimbledon Common, where elevations reach 55m above Ordnance Datum. The rest of London Borough of Merton is lower lying at 18-35mAOD, with gentle slopes associated with the floodplains of the River Wandle and Beverley Brook catchments.

The Borough is generally urbanised and has large areas of impermeable surface, with the main town centres interspersed by large areas of green open space, namely Wimbledon Park, Wimbledon Common, Bushey Mead, Morden Park, Morden Hall Park and Mitcham Common.

The Borough contains four main river watercourses; Beverley Brook, Pyl Brook, River Wandle and River Graveney. The Beverley Brook forms the western boundary of the London Borough

of Merton and its main tributary, the Pyl Brook flows northwest through the southwest corner of the Borough. The River Wandle flows north through the centre of the Borough and its main tributary, the River Graveney, forms the Borough's eastern boundary.

Geology

The underlying bedrock of Merton is almost entirely London Clay, with a small area of Claygate Member and Bagshot Formation to the northwest. The majority of the superficial deposits are various River Terrace Deposits (gravel, sandy and clayey in part), which differentiate on the basis of altitude but are geologically similar. These can be sub-divided into Taplow Gravel Formation and Hackney Gravel Member which are located in the Mitcham area; Kempton Park Grave in Merton and New Malden and Black Park Gravel is located on the higher ground at Wimbledon. Ribbons of Alluvium (mainly sand, silt and clay) are distributed along the River Wandle and Beverley Brook.

Ground investigations have shown a shallow perched groundwater layer is common across significant parts of the borough, due to the presence of the underlying London Clay. This perched groundwater layer can result in groundwater ingress to basements if tanking is not appropriate or up to standard.

Local Drainage and Sewer Network

The waste water drainage infrastructure across the borough is generally a separate surface and foul sewer system which is the responsibility of Thames Water. However, in the extreme northern parts of the borough there is combined sewer system. Many of the surface water sewers discharge locally into the river network. Thames Water has a duty as a statutory water undertaker to provide clean water in the central and northern areas of the borough and Sutton and East Surrey Water provide clean water services to the southern part of the borough. Thames Water are responsible for receiving surface water drainage from development which discharge via adopted sewers and for maintaining trunk sewers into which the majority of the highway drainage in Merton connects.

Several flood events in the borough have occurred as a result of high water levels in the River Wandle, Graveney, Beverley Brook and Pyl Brook, blocking storm water outfalls and causing water to back up in the sewer system and highway drainage. Across Merton, trash screens and culverts have the potential to become blocked by items such as plant debris and rubbish.

Plans for regeneration, development and intensification within London Borough of Merton may present a challenge to the existing drainage systems. However, it also affords a crucial opportunity to address long-standing issues and problems relating to surface water flooding and pressure points on the drainage system through strategic infrastructure improvements and upgrades to the drainage system through the implementation of SuDS and slowing the flow of runoff at source.

Local SuDS Specific Requirements

SuDS are an extremely important tool to help manage the risk of flooding. They are the preferred drainage method across Merton. All planning applications and Drainage Strategies are expected to follow the range of policies set out within the London Plan and Merton's Local Plan.

Merton's adopted Local Plan consists of the Core Strategy (2011), Sites and Policies Plan and Policies Map (2014) and the South London Waste Plan (2012). A new Local Plan is in the process of being prepared by Merton, which will replace the Core Strategy and Sites and Policies Plan and Policies Map. All planning applications should have consideration and regard to policy DM F2 (SuDS and wastewater) within Merton's Sites and Policies Plan.

In Merton, discharge rates for new developments should be restricted to Greenfield runoff rates. For brownfield sites, runoff rates should not be more than three times the calculated greenfield rate, in line with the London Plan's Sustainable Construction and Design SPG (Section 2.5.2). Large potential development areas with a number of new allocation sites should look to develop a strategy for providing a joint SuDS scheme. This should be on an integrated and strategic scale and where necessary would require the collaboration of all developers involved in implementing a specific expansion area or site.

The Drainage Catchment areas, identified and mapped in Merton's Strategic Flood Risk Assessment (SFRA), should be considered for development sites that are not directly at

risk of surface water flooding, to identify flow paths to areas downstream that are at risk from surface water flooding and could be impacted by the development. Mitigation measures, such as attenuation measures, should be used in the upper catchment areas to prevent increased risk to the downstream sites.

Policy 5.13 in the London Plan sets out the drainage hierarchy that developers should follow for managing surface water in London Boroughs. The London Plan drainage hierarchy is set out in Section 2.5.1 of this SFRA. Generally the aim should be to discharge surface water run-off as high up the following hierarchy of drainage options as reasonably practicable. Where possible, stormwater should be managed in small, cost-effective landscape features located within small subcatchments, rather than being conveyed to and managed in large systems at the bottom of drainage areas.

The passage of water between stages of the SuDS management train should be considered through the use of natural conveyance systems (e.g. swales and filter trenches) wherever possible. Pipework and sub-surface proprietary produce may still be required, especially where space is limited. Pre-treatment (i.e. the removal of silt and sediment loads) and maintenance is vital to ensure the long-term effectiveness of SuDS. Overland flow routes will also be required to convey and control floodwaters safely and effectively during extreme flood events. Generally, the greater the number of techniques used in a series the better the performance is likely to be and the lower the risk of overall system failure. SuDS can be applied in all development situations, although individual site constraints may limit the potential of some sites achieving full benefits for all functions. The variety of SuDS available allows planners and designers to make full potential of the local land and consider the needs of local people when implementing the drainage design. The wishes of all the relevant stakeholders needs to be balanced in additional to the risk associated with each design option. Developers are strongly recommended to use to the council's pre-application planning advice service.

Facing Page: Baltic Close, Merton

7.0 Design & Evaluation Stage 1 – Concept Design

The Concept Design stage is critical for pre-application consultation, as it is an opportunity to offer preliminary design ideas for discussion. It should give an early indication of the type of approach being proposed for surface water management through the SuDS design.

7.1 Objectives of SuDS Concept Design

SuDS Concept Design is used to express initial ideas for the management of rainfall within a development. The Concept Design plan and Preliminary Design Statement are necessary for discussions with planners, regulatory bodies, water companies and other stakeholders.

7.2 Presentation of the Concept Design submission

The Concept Design information will usually be presented in two parts:

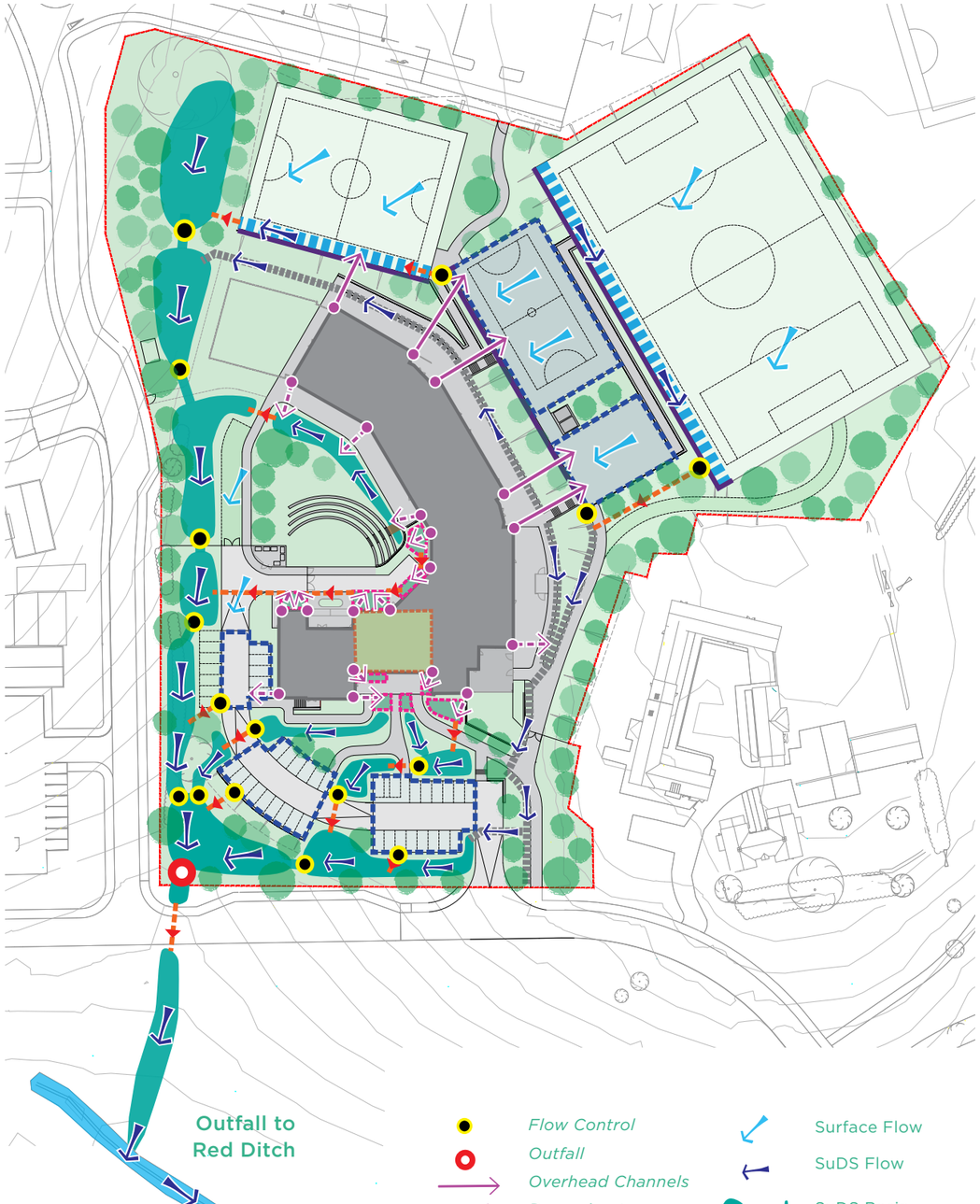
- a plan with all aspects of the design that can be shown graphically, and
- a short SuDS design statement including information such as hydraulic data that is more easily described in words.

The Concept Design will reflect the criteria and performance parameters set out in the Surface Water Management Strategy and Flood Risk Assessment for the development, where these are present. It will also meet the Non-Statutory Technical Standards, Planning Policy Framework (paragraphs 100, 103 and 109 - current at time of writing) and Local Authority requirements.

Key data and information will include:

- data to inform the design, where relevant e.g. maps of site context, outline river and coastal flood risk, surface water flood risk, and ground water source protection
- a drawing to identify existing landscape and habitat features that may influence SuDS proposals
- information on utility services, as these may fundamentally affect the SuDS design, particularly on previously developed land or in retrofit schemes
- a contour plan using the best source of topographical information available.

Concept Design for Holyoakes School, Robert Bray Associates



7.3 What Concept Design demonstrates

The SuDS Concept Design will demonstrate an understanding of how proposed development will impact on:

- the site and its natural hydrology
- historical drainage elements where these are present
- the ecology of the site and its surroundings
- the landscape character of the locality
- natural flow routes.

Evaluation will begin with:

- existing flow route analysis for the existing site
- a modified flow route analysis for the proposed development.

Preliminary design will include:

- Runoff collection – how rainfall is collected and conveyed to source control features.
- Source control – runoff managed as close as possible to where rain falls.
- The management train – SuDS components and storage features linked in series, which convey flows along modified flow routes through the development.
- Sub-catchments – small discrete areas that manage their own runoff.
- Maintenance – effective performance and reasonable care costs.

Australia Road, London, where permeable paving provides source control prior to SuDS Basins.

7.4 Concept Design process

7.4.1 Flow route analysis

The natural hydrology, and the way that a development affects how rainfall behaves on a site, are assessed initially by flow route analysis.

The first step in flow route analysis is to consider how a site behaves naturally before development. This analysis can be applied to re-development and retrofit sites, and is informed largely by topography and geology. There may be a number of other factors influencing the analysis, including:

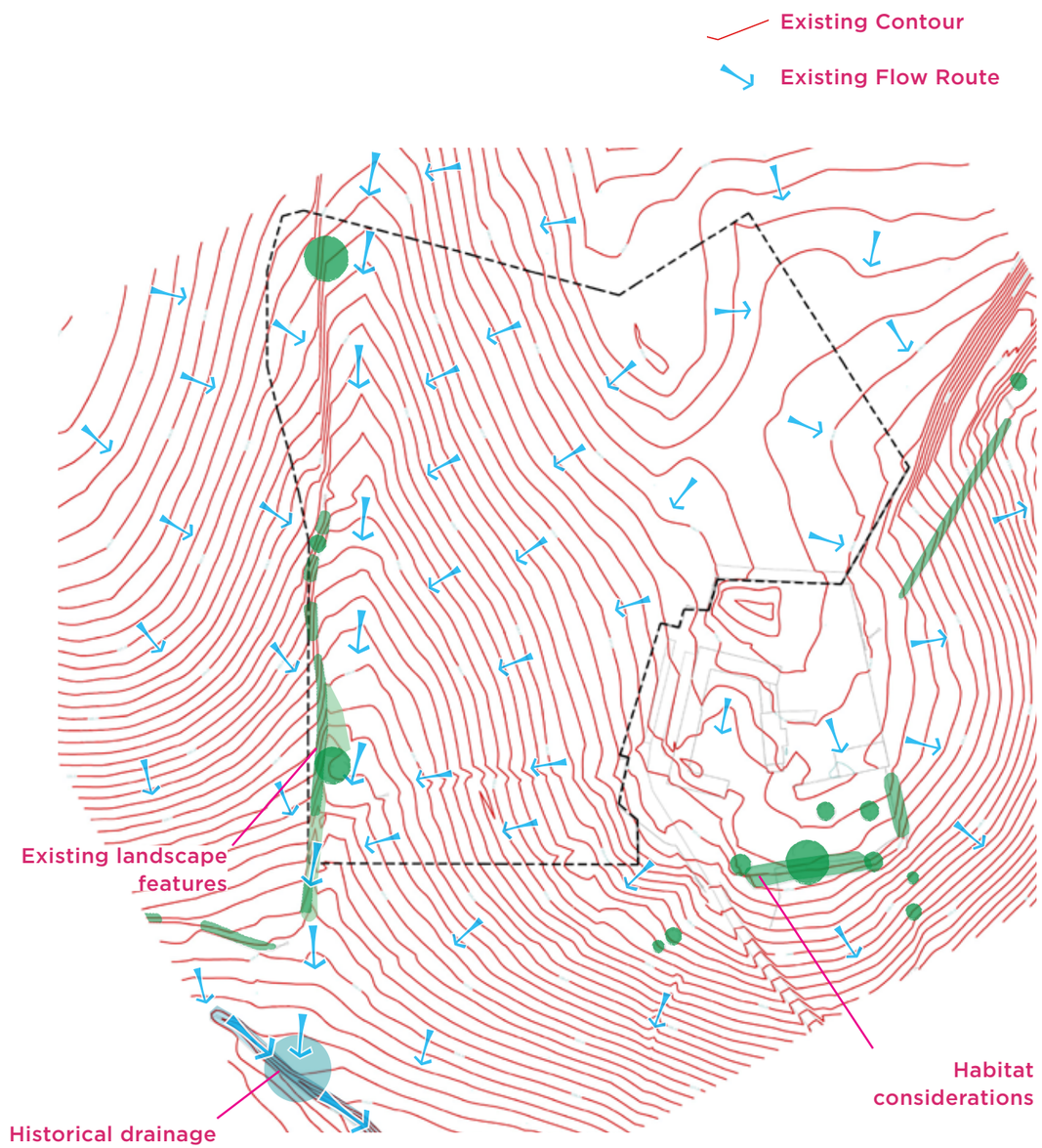
- historical drainage e.g. sewers or land drains
- discharge locations
- contamination issues
- existing landscape features
- habitat considerations.

A topographical survey, expressed both as spot levels and contours, provides the basic template for existing and future flows. Geology indicates whether rainfall will flow from the site as runoff, infiltrate into the ground, or leave a site in a combination of these two ways.

Designers should be mindful that a site that infiltrates naturally may not continue to infiltrate once it has been developed.

The final treatment stage at Hopwood Motorway Service Station. Monitoring has demonstrated that water of a very high quality (near drinking water standards) leaves site.

Step 1 – Existing Flow Route analysis

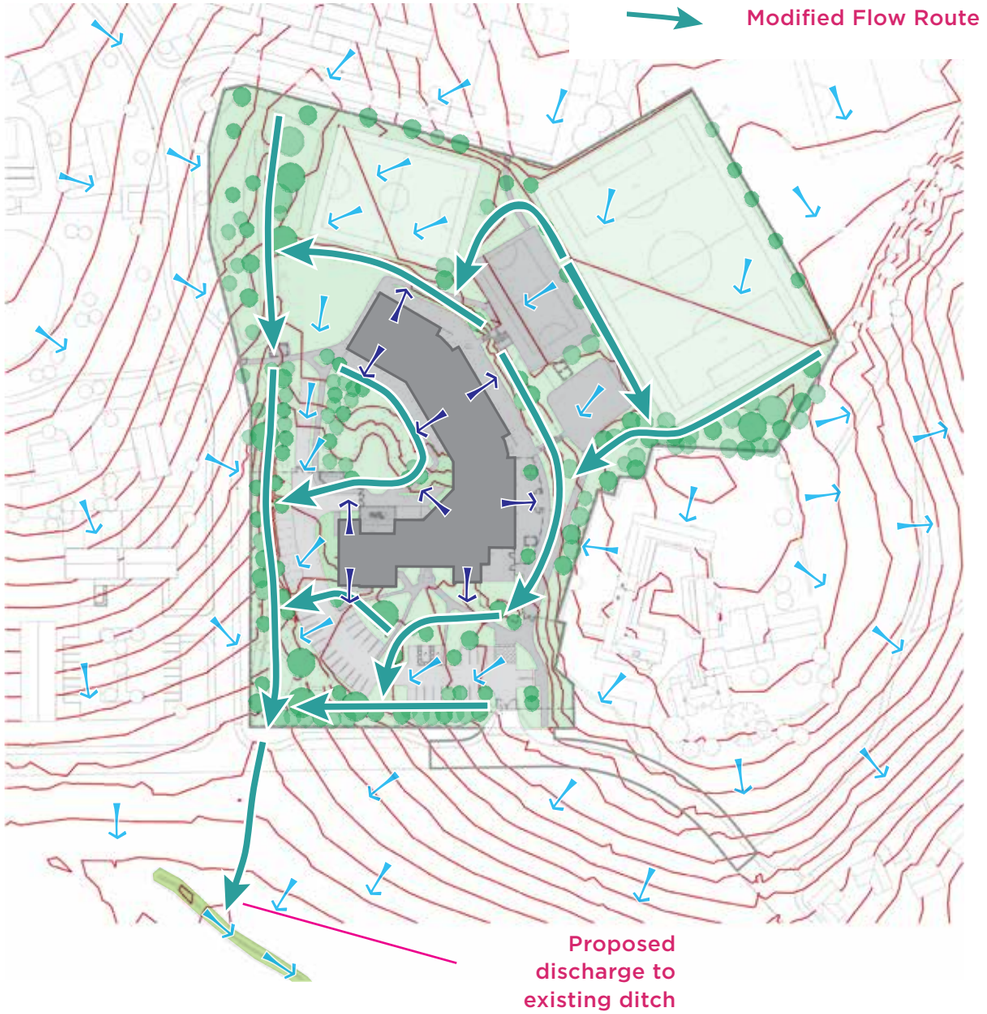


Flow Route Analysis for Holyoakes School, Robert Bray Associates.

Step 2 – Modified Flow Route analysis

The modified flow route analysis is the basis for low flow conveyance through the site, overflow arrangements and exceedance routes when design criteria are exceeded.

Once the modified flow routes have demonstrated that runoff can flow predictably through the site, the arrangement of runoff collection, source control, site control, regional control, conveyance, storage and final release from site can be designed.



Modified Flow Route Analysis for Holyoakes School, Robert Bray Associates.

7.4.2 Building the Management Train

A successful management train begins with source control, and uses surface conveyance, wherever possible, to link subsequent SuDS components in series. Integration of the management train should be considered from the Concept Design stage and throughout the design process.

The management train provides potential for 'interception losses' along its whole length, as well as through soakage into the ground, evaporation, and transpiration through the leaves of vegetation. It also reduces the rate at which runoff flows through the site, and provides treatment of runoff as it passes through each SuDS component.

Selecting SuDS components within the management train:

- Source Controls: green and blue roofs, permeable surfaces, filter strips, protected filter drains, together with some swales and basins, provide the first stage of treatment, intercepting primary pollution and reducing runoff flow rates.
- Site Controls: these features will normally be preceded by source controls, and meet remaining storage requirements. Permeable surfaces will often store the whole attenuation volume. Where the is insufficient storage at source, additional open conveyance and storage structures, such as basins and protected wetlands or ponds, will manage remaining runoff volumes on most sites.
- Regional Controls: where it is difficult to store all the runoff within a development boundary, clean water can be conveyed to open storage features within public open space or other parts of a development to contribute to open space amenity.

Flow Controls can be incorporated in green roofs to manage volumes and provide source control, transforming them into 'blue roofs'.

7.4.3 Collection of runoff from hard surfaces

The way that runoff is collected from roofs, roads, car parks and other hard surfaces is a critical consideration in any SuDS design.

Conventional drainage techniques such as gully pots and pipes, promote the concentration of flows and mobilisation of pollutants, forcing runoff deep underground, so that management of runoff at or near the surface is difficult to achieve.

Surface collection in channels, gutters and permeable pavements, or as sheet flow onto grass surfaces, keeps runoff at or near the surface, enabling cost-effective and visually legible design.

Collection of runoff at or near the surface also reduces maintenance costs, and allows for simple removal of blockages.

Highway runoff is intercepted using a chute gully and taken into a conveyance swale at this retrofit SuDS project. Devonshire Hill, Haringey.

Permeable paving and planted open channels collect runoff from hard surfaces at Bewdley School, Worcestershire.

7.4.4 Source Control - managing runoff at source

Source Control features include pervious surfaces, filter strips, green / blue roofs, and some basins and swales. Source control features slow the flow of runoff, and remove the worst pollution at the beginning of the management train.

Source control features protect the remaining parts of the management train, enhancing amenity and biodiversity within the development.

Source control also ensures that SuDS components are less susceptible to erosion further down the management train, as runoff is not conveyed at peak flow rates along the system, thereby increasing the potential for interception losses.

Design Note:

Source Control features, such as pervious pavements and blue-green roofs, can be designed to attenuate all of the 1 in 100 + CCA storage, with the introduction of a simple flow control device.

A basin without source control can result in silt, oil and litter pollution that reduces both the amenity and biodiversity value of the feature.

7.4.5 Conveyance of runoff between SuDS components

Runoff should travel along the management train at or near the surface wherever possible. The features commonly used for this purpose are swales or other vegetated channels and hard-surfaced channels such as rills, gutters or dished channels in a more urban context. Conveyance is also possible through permeable pavement sub-base as well as filter drains and under-drained swales.

Surface conveyance can provide the following benefits:

- a reduction in infrastructure costs
- increased interception losses
- treatment of pollution
- ease of maintenance
- easily understood SuDS – legibility
- connectivity for wildlife
- attractive landscape features.

Where runoff is conveyed below ground through a pipe, for example connecting one SuDS component to the next to facilitate crossing under a road or pathway, the invert level of the pipe should be kept as shallow as possible to re-connect flow into surface SuDS features. Pipes should ideally only be used as short connectors, without inspection chambers or bends, to reduce the risk of blockage and allow simple rodding or jetting when necessary.

The CIRIA SuDS manual (Page 876) notes that:

“SuDS design usually avoids use of below-ground structures such as gully pots, oil interceptors, and other sumps which are a wildlife hazard, often ineffective and expensive to maintain.”

Identification of surface or shallow sub-surface conveyance at the Concept Design stage is important to ensure that these pathways are retained through the remaining design process.

Conveyance swale at Waseley Hills High School, Worcestershire.

Concept Design

7.4.6 Introducing sub-catchments

Many drainage designs adopt an approach where all flows are taken to the lowest point of the site and attenuated in a single location, often referred to as a **'pipe-to-pond'** or 'pipe to box' approach.

The 'pipe to pond' approach can result in unsightly, polluted and sometimes hazardous pond or basin features that offer little amenity or wildlife benefit. The 'pipe to box' approach results in below-ground structures that provide no amenity or wildlife benefit at all. All end of pipe solution may fill with silt and generate management problems.

When integrating SuDS into a development, the site should be divided into sub-catchments to maximise treatment and storage capacity.

The sub-catchment boundary is usually defined as the surface area which drains to a particular flow control, and can be considered as a mini-watershed.

Flows are conveyed from one sub-catchment to the next along one or more management trains, following the modified flow routes determined early in the design process.

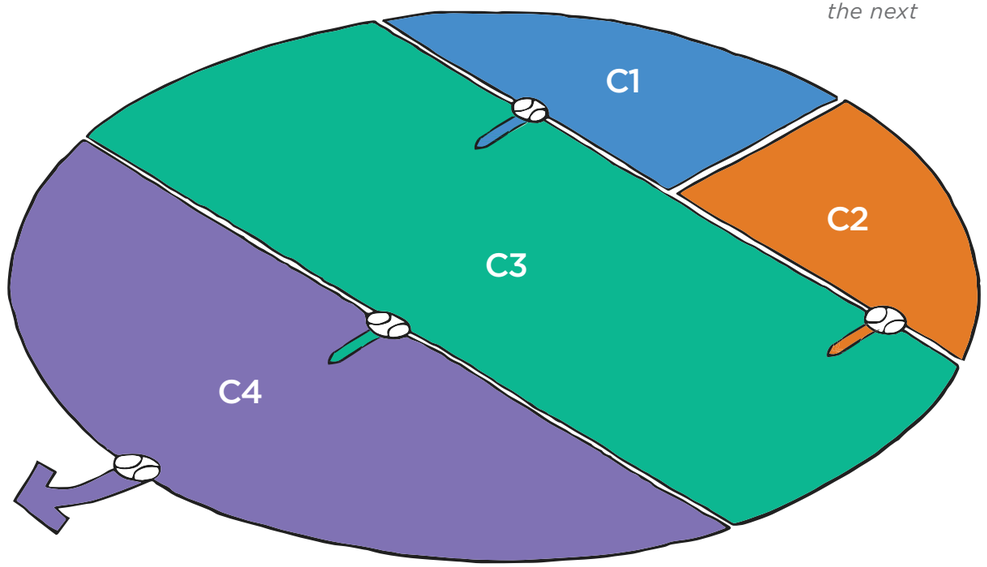
Each sub-catchment contributes flows to the following sub-catchment or to an outfall.

Controlled flows are released from one sub-catchment feature to the next, as here at Birchen Coppice Primary School, Kidderminster.

A flow control generally defines the downstream end of a sub-catchment, with the flow control situated at the lowest topographical point within the sub-catchment in locations that are accessible for inspection and maintenance.

Concept Design drawings should identify sub-catchment boundaries with associated storage and flow control locations throughout the development.

Flow control with contolled discharge from one catchment to the next



Sub-catchments are generally defined by flow controls. Flows are conveyed from one sub-catchment to the next.

Design Note:

Integrating storage within sub-catchments, as part of site layout, greatly reduces the land take requirement for attenuation, by exploiting the inherent storage capacity of individual SuDS features.

7.4.7 Managing pollution

The treatment required to mitigate pollution depends upon the level of pollution hazard. An adequate number (and type) of SuDS components is required in order to intercept or break down pollutants.

Source control components are introduced at the beginning of any management train to protect the development and meet amenity and biodiversity criteria within the site.

The following table is based on the requirements for discharge to surface waters set out in the SuDS Manual, Chapter 26, Water quality management: design methods, (CIRIA, 2015).

Discharge to surface water (usually on impermeable soils)

Contributing Surface Type	Pollution Hazard Level	SuDS Components
Residential roofs	Very Low	Discharge to any SuDS components
Normal commercial roofs	Low	Discharge to any SuDS components
Leachable metal roofs	Low but polluting	Bioretention or source control with one or two further SuDS components. Refer to Detail Design Section
Driveways, residential, car parks, low traffic roads, low use car parks (schools and offices)	Low	Permeable pavement or source control with one SuDS component
Commercial yards, delivery areas, busy car parks, other low traffic roads (except trunk roads and motorways)	Medium	Permeable pavement or source control with one or two further SuDS components. Refer to Detail Design Section
Haulage yard, lorry parks, waste sites, sites handling chemicals and fuels, industrial sites (for trunk roads and motorways follow Highways Agency risk assessment process).	High	Carry out detailed risk assessment and consult with the environmental regulator.

Additional considerations for infiltrating soils

- Discharge to protected waters or protected groundwater (e.g. SSSI or SPZ's) may require additional treatment stages and liaison with the environmental regulator.
- More general discharge to groundwater (usually infiltrating soils) can be referenced in table 26.4 of the SuDS Manual.
- Medium pollution hazard level developments will require risk screening to determine appropriate mitigation measures. Refer to table 26.5 and 26.6 of the SuDS Manual
- For developments of a high pollution hazard level a detailed risk assessment will be required.

Typical diffuse urban pollution concentrated at a conventional gully.

Linear swales alongside an entrance path at this infiltration SuDS project, Burlish Primary School.

7.4.8 Method of discharge – how rainfall leaves the site

Rainfall should not discharge into the foul sewer.

The way that rainfall leaves a development should follow the preferred hierarchy:

1. re-use on site
2. infiltration into the ground
3. a natural watercourse
4. surface water sewer
5. combined sewer.

The final swale at Bewdley School is a colourful outfall into the existing watercourse.

7.4.9 Preliminary flow and volume calculations

It is convenient to consider flow and volume requirements at this stage in the design process to ensure that natural losses are replicated and sufficient volumes of runoff can be temporarily accommodated to allow for discharge from site via a flow control and/or infiltration.

In some circumstances, for example where development is speculative, it may be acceptable for the Concept Stage to omit flow and volume calculations, but a Modified Flow Route analysis will be required to show that runoff can be effectively conveyed to a discharge location.

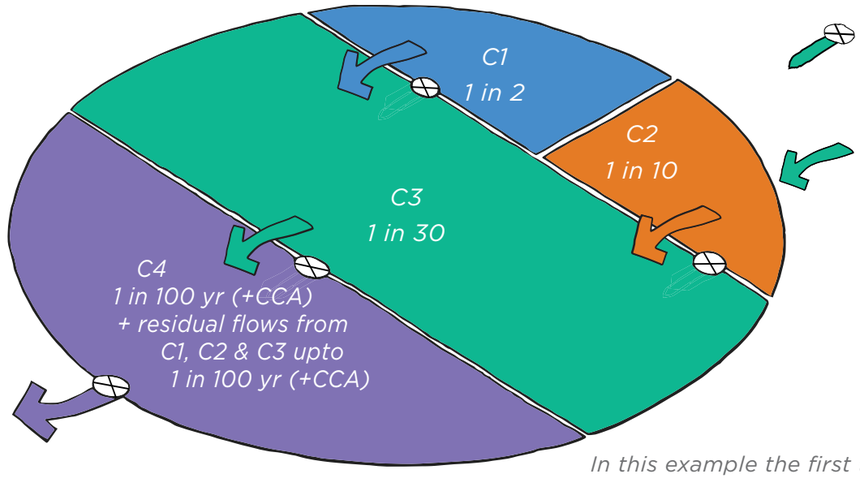
Storage volumes are usually presented as a single volume.

This form of expression encourages the 'pipe to pond' practice and prevents simple comparison of storage values between similar sites.

Expressing storage as 'volume per m^2' allows the designer to allocate storage throughout a site in discrete sub-catchments, and provides a straightforward way for the evaluation team to check that calculated storage volumes are acceptable.

Ideally each sub-catchment will manage its own runoff up to the 1 in 100 year return period rainfall event. Where this is not viable, part of the storage volume will be provided depending upon the opportunities for storage within the subcatchment, with all residual flows cascaded into an adjacent sub-catchment or 'site control'.

This approach maximises the opportunity for storage throughout the development.



Each catchment may only control and attenuate runoff up to lesser rainfall events (eg. 1 in 2 years, 1 in 10 year, 1 in 30 years) with residual flows passing into the next subcatchment.

In this example the first three catchments (C1, C2 & C3) only partially attenuate their own runoff, with residual flows passing into catchment C4 where these residual flows must be attenuated, along with C4's own runoff, to the maixmum design storm (eg. 1 in 100 + CCA).

7.4.10 Infiltration

After any allowances have been made for the potential to harvest runoff, the next consideration in managing flows and volumes is to assess the ability of a site to infiltrate rainfall completely, partially, or discharge largely as runoff.

The ability of a site to infiltrate water should be evaluated considering:

- the nature of the soil geology and capacity to infiltrate
- the risk to stability of the ground where infiltration is proposed
- the risk of pollution to groundwater
- the depth of seasonal groundwater
- the risk of unpredictable pathways being taken by infiltrating water.

Infiltration will generally be possible if the infiltration rate is 1 x 10^{-5} ms (36mm/hr) or greater, subject to the soil and subsoil retaining infiltration capacity following construction or site disturbance. Infiltration is still viable on sites with lower infiltration rates, however additional storage capacity would be required to allow time for flows to infiltrate.

Measures must be taken to protect infiltration capacity during construction. Compaction of soil layers may affect the ability of sites with infiltration rates lower than 1 x 10^{-5} to allow water to soak into the ground. These sites are particularly susceptible to damage due to construction activity.

The depth and location of infiltration tests should reflect where infiltration is proposed on site. Shallow features such as permeable pavements will require shallow infiltration tests.

Guidance exists which states that where infiltration features are situated within 5m of foundations, the risk to the foundations should be considered. This is usually applied as a general rule where infiltration within the 5m offset from the foundation is not permitted. However, the guide was originally intended for point infiltration soakaways in susceptible soils. SuDS design encourages 'blanket infiltration' features that are less likely to affect soil conditions, as they mimic grass surfaces around buildings. The distance offset for infiltration will be at the professional judgment of a suitably qualified engineer.

Additional site investigations will be necessary to assess risks associated with infiltration, and should follow guidance in the CIRIA SuDS Manual 2015, Chapter 25 p543.

BGS Infiltration SuDS map

www.bgs.ac.uk

Using SuDS Close to Buildings

www.susdrain.org

Risks Associated with Infiltration

CIRIA SuDS Manual 2015, Chapter 25

7.4.11 Managing runoff from site

If the site does not infiltrate effectively over all return periods, then rainfall will leave the site as runoff to a watercourse, the surface water sewer or combined sewer. The greenfield flow rates from the site must be calculated, and then attenuation volumes determined.

Rainfall calculations are necessary, even at Concept Design stage, to gain an idea of volumes of runoff to be stored on site.

These calculations can also be used at the Outline Design stage, but may need to be re-assessed at the Detail Design stage.

New hard surfaces that are introduced through development increase both the rate and volume of runoff. This is because runoff flows more quickly from the site, and natural volume losses do not happen as they did before development.

The additional rate of runoff is managed through **attenuation storage**.

Some of the pre-development volume losses can be mimicked by using SuDS components to demonstrate interception losses and ongoing losses (Long Term Storage). Other methods such as rainwater harvesting will further reduce the additional volume generated by the development.

The approach to managing flows and volumes from developments - set out in the NSTS - seeks to minimise the impact of the additional volume generated by development as well as control the rate of runoff to pre-development patterns.

It allows a variable 'greenfield rate' of runoff from development between the 1 in 1 and 1 in 100 year return periods with the additional volume generated by the development allowed to discharge at a maximum of 2 litres per second per hectare. This approach **(Approach 1)** is now the preferred method set out in the 2015 SuDS Manual. Managing flows and volumes to a single Qbar discharge rate **(Approach 2)** may be acceptable if Approach 1 can be shown to be unachievable.

See Section 7.4.13 for more info on

Flow rate calculations

Design Note:

The website **www.uksuds.com** provides estimation tools for the calculation of 'greenfield runoff rates', 'attenuation' volumes and 'long-term storage' volume losses.

7.4.12 Attenuation storage - managing restricted flow rates

Attenuation is the temporary storage of surface water at or near the surface in a suitable feature. Attenuation is required when the rate of runoff being generated by a rainfall event (**inflow**) is greater than the allowable discharge rate (**outflow**) from the development. Discharge from the feature is restricted by a **flow control** which allows the stored water to drain down slowly.

The inflow of rainfall is calculated by multiplying the **design rainfall** by the **developed area**.

The developed area may be subject to an **Urban Creep** factor to take into account the creation of additional impermeable surfaces following development (such as extensions, additional parking and paving). This can increase attenuation volumes by up to 10%.

The **design rainfall** is determined using historic records to predict how much rainfall is likely to occur at a particular location and over a given **return period**. The data is then used in attenuation calculations to calculate runoff and inflow into SuDS components.

The design rainfall may be subject to a **Climate Change Allowance (CCA)**, applied to rainfall intensity values. CCA is intended to anticipate future increases in rainfall intensities, and is currently estimated to range between 5% and 40%. As it will impact upon attenuation volumes, the appropriate figure should be considered at Concept Design stage.

The term '100-year rainfall event' is used to define rainfall (intensity and duration) that statistically has a 1% chance of occurring in any given year. This can also be expressed as a 1 in 100 year event or 1% Annual Event Probability (AEP).

In SuDS design it is useful to use a range of return periods to identify everyday rainfall (e.g. 1 in 1 or 1 in 2 year events), occasional rainfall (e.g. 1 in 10 year events) and exceptional rainfall (e.g. 1 in 30 or 1 in 100 year events). This enables the allocation of different volumes in different places, and encourages the use of sub-catchment design.

Attenuation occurs within permeable pavement sub-base and these attractive 'canals' at this 106 units per hectare housing development at Riverside Court, Stamford. Permeable paved areas are unlined and demonstrate significant losses for further volume control.

Design Note:

The Designer should consider the implications of **Climate Change, Urban Creep** and how flows will be controlled (**Approach 1** or **Approach 2**) as these can significantly impact the amount of attenuation storage calculated.

Qbar and **Qmed** are terms used to describe the average Greenfield runoff rate. Qbar and Qmed are derived using different equations but should result in similar values, as both relate to a return period of approximately 1 in 2 year. Qbar / Qmed are used to define the **maximum outflow** rate for **Approach 2**.

7.4.13 Flow rate calculations

The aim of controlling flow from a development, whether it has been previously developed or not, is to restrict outflow rates to pre-existing 'greenfield runoff rates'.

There are two approaches to controlling outflow rates: Approach 1, as set out in the NSTS (non-statutory technical standards) requiring additional volume management, and Approach 2, the current practice commonly called the **Qbar method**.

Approach 1 – (NSTS S2 and S4), where the volume of runoff is managed to Greenfield volume, the allowable discharge rate is permitted to vary between the 1 in 1 year and 1 in 100 year Greenfield runoff rates for the respective rainfall return periods.

Approach 2 – (NSTS S6), where additional runoff volumes cannot be managed on site, runoff rates must be further restricted to ensure that there is no increase in flood risk elsewhere. The general approach that is adopted is to limit the maximum outflow rate to Qbar (approximately equivalent to 1 in 2 year greenfield rate) for all rainfall return periods up to the 1 in 100 year rainfall event depending on the local soil type.

Approach 2 is simpler but usually results in larger storage volumes than Approach 1.

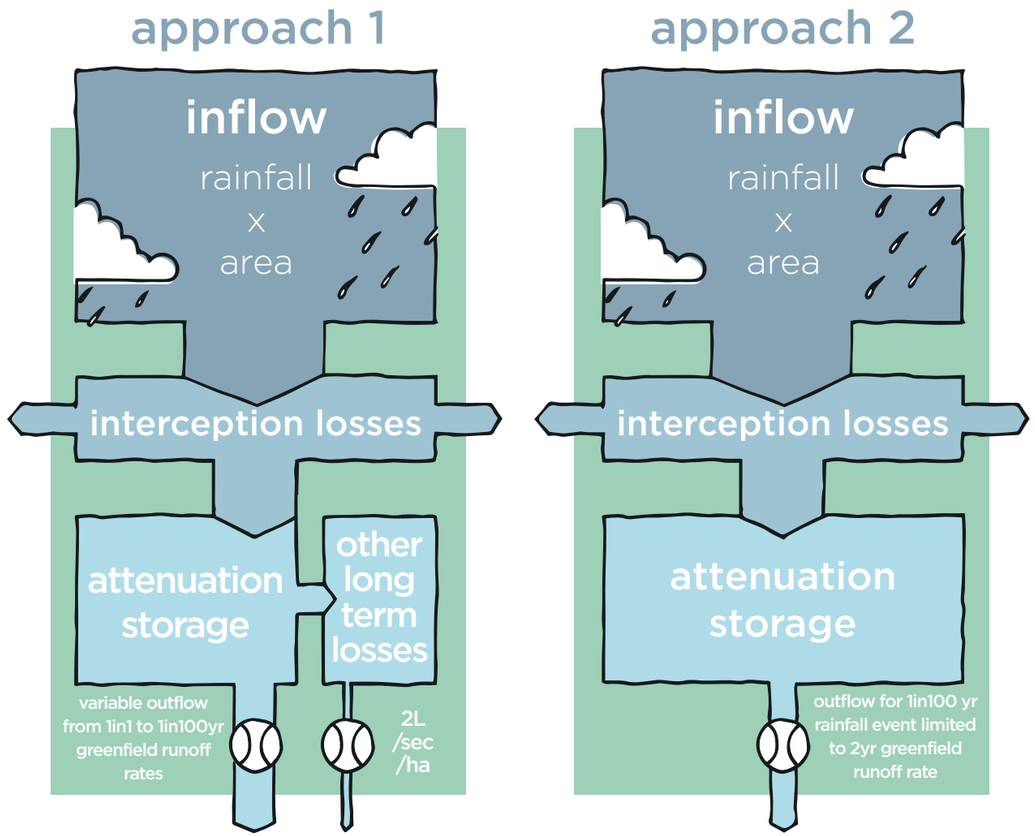
An allowance for climate change, and in certain situations urban creep, should be included in hydraulic calculations.

An online tool for estimating Greenfield runoff rates can be found at **www.uksuds.com** or calculated using the methodology in the SuDS Manual 2015. The uksuds.com calculator is based on regional geological mapping which can be unrepresentative of actual site conditions. Inputs to the Greenfield runoff calculation should rely upon **actual soil types for the site** rather than regional geological maps.

In Approach 1 the 'greenfield runoff rate' will increase with increasing storm return periods. The flow control mechanism will need to account for this increase in flow rate.

In Approach 2 the Qbar value for a site will only be achieved for the site or sub-catchment when the storage feature is full. Most of the time the flow rate is less until a full storage head is generated.

See Climate Change Allowance (CCA) Section 9.5.4.6 and Urban Creep Section 9.5.4.7



Approach 1 and Approach 2 - Discharge Requirements

	1 in 1 year rainfall (maximum outflow rate)	1 in 100 year rainfall (maximum outflow rate)	Long term storage-volume control
Approach 1	1 in 1 year greenfield rate	1 in 100 year greenfield rate	Yes
Approach 2	Qbar/ Qmed	Qbar/ Qmed	No

Long Term Storage

SuDS design seeks to mimic the natural losses that occur across natural catchments. The volume of post development runoff should match that of the natural catchment.

Reduction in development runoff volume can be achieved by:

- rainwater re-use (harvesting)
- interception losses
- long-term storage.

Where rain harvesting is provided, 50% of the harvest volume can be offset against volume losses where demand exceeds yield. This is a general rule of thumb which is stated within BS8515.

SuDS components such as permeable pavements provide interception losses. Long- term storage can also be incorporated into the pavement design and they can be used for rainwater harvesting in certain situations,

Previously developed land (Brownfield sites)

Approach 1 and Approach 2 also apply to management of rate and volume of runoff from previously developed sites. LPAs will request runoff from these sites to be reduced to **greenfield runoff rates**.

A relaxation on outflow controls or the extent of storage required will only be permitted with the express agreement of the LPA and LLFA at an early stage of the project. This should be discussed at the Pre-Application stage.

Design Note:

Storage volumes derived at the Concept Design stage may differ from those calculated at the Detail Design stage. Storage volumes derived at Concept Design stage should be approximate, in order to demonstrate that the scheme is sensibly proportioned.

7.4.14 Defining the area of development that contributes to runoff

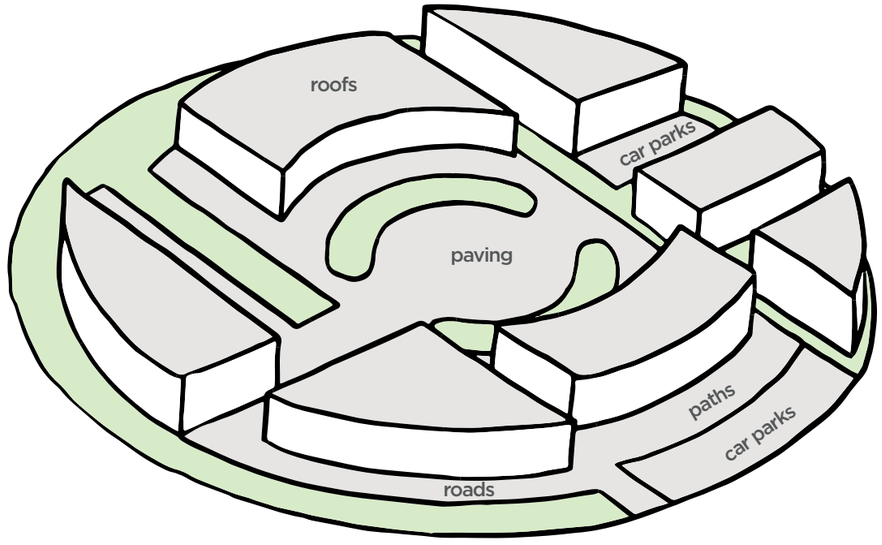
The area of development may change during the design process, but it is important to have an initial estimate of the amount of storage, to inform the layout of the SuDS design.

The area generating increased runoff is the developed area of the site, and comprises:

Roofs and hard surfaces (roads, car parks, paving, etc.) proposed for the site.

There is no industry standard for setting the rate of runoff from permeable areas (e.g. green space). In calculations allow for the location's estimated greenfield runoff rate.

Hard surfaces generate increased runoff, and determine the volumes to be managed.



Design Note:

The percentage of rainfall that occurs as runoff from a surface is called the 'coefficient of volumetric runoff' (Cv). Water & Sewerage Companies (WaSC) use Sewers for Adoption Ed7 (p.55) which recommends a Cv of 1.0 (100%) from all hard surfaces.

Cv's of 0.95 from roofs and 0.9 from paved areas would be considered by the LLFA as part of Technical Assessment, where SuDS are not being adopted by WaSC.

7.5 Concept information required for SuDS evaluation

The information required at the Concept Design stage will depend on the type and scope of the proposed development.

7.5.1 Pre-application discussion

The design team will provide a Concept Design for a pre-application design meeting, or as preliminary design information should a pre-application meeting not be appropriate.

Pre-application discussions with the LPA and LLFA provide an opportunity for the designer to confirm the preliminary requirements for the SuDS design, and for the evaluation team to understand the objectives and character of the SuDS proposed for the development.

Constructive discussion between the LPA, the LLFA and the SuDS designer will save the developer time and the cost of potential re-design, providing planners with reassurance that the project that is delivered will meet local planning expectations.

The discussions will be informed by the LASOO (Local Authority SuDS Officer Organisation) NSTS for Sustainable Drainage: Practice Guidance.

http://www.susdrain.org/files/resources/other-guidance/lasoo_non_statutory_suds_technical_standards_guidance_2016_.pdf

A sunken SuDS courtyard with solar water feature into a formal rill at Bromsgrove Civic Centre.

7.5.2 Preliminary water quantity considerations

At the Concept Design stage it is necessary to show how runoff is collected and how it is stored within the development:

- The designer will confirm whether Approach 1 or Approach 2 is being used, and confirm how volumes are being managed.
- A reduction in the volume of rainfall discharged from the site will be demonstrated by 'interception losses' and long-term storage, where this is appropriate (Approach 1).
- Approximate storage volumes should be provided for each location where flows are attenuated.
- Storage will be demonstrated within sub-catchments and along the management train, with the location of flow controls confirmed.

Design Note:

Ideally runoff should be stored in shallow landscape features. Where this is not possible, deeper tank or pipe storage must be justified.

Two shallow raingardens provide storage at Measham Leisure Centre. Robust ground cover should persist through winter in order to protect soils.

7.5.3 Preliminary water quality considerations

At the Concept Design stage it is necessary to show how water quality is managed:

- A simple assessment of risk using the 'treatment stage' approach is acceptable on low and medium risk development. If the risk screening (SuDS Manual p571) demonstrates that the 'simple index approach' is appropriate, then the 'treatment stage' is acceptable.
- All sites should demonstrate source control to remove silt, heavy metals and hydrocarbon pollution at the beginning of the management train.
- Unless permeable pavement is used to collect runoff, where the pavement provides high water quality treatment, there will usually be a second feature to manage additional volumes and provide additional treatment.

The design will also consider:

- Sensitivity of the receiving watercourse or groundwater.
- Environmental and technical constraints such as contamination, protected landscapes, SSSI, SAC, AONB, Ancient Woodland and existing biodiversity features.
- The LPA and LLFA will not accept the gully pot as a method of treatment. Table 26.15 of the CIRIA SuDS Manual denotes that conventional gully and pipe drainage provide zero treatment.

Design Note:

Where there is a high risk of pollution, a formal risk assessment is required.

High-risk development:

Trunk roads and highways – follow the guidance and risk assessment process set out in HA (2009)

Haulage yards, lorry parks, highly frequented lorry approaches to industrial estates and waste sites, sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured and industrial sites. Discharges may require an environmental licence or permit obtain pre-permitting advice from the environmental regulator. Risk assessment is likely to be required.

CIRIA The SuDS Manual 2015

7.5.4 Preliminary amenity considerations

Amenity relates both to the usefulness and the appearance of SuDS features. Ideally SuDS features should be integrated into the landscape, to minimise dedicated land take and management obligations.

Key amenity elements to consider when designing SuDS features include:

- Legibility – can the design be understood by users and managers?
- Accessibility – can all parts of the SuDS scheme be easily reached, both for recreation and maintenance? All parts of the scheme must be safe by design. It is not usually appropriate to fence SuDS features for safety reasons (except toddler fences where young children may not be fully supervised).
- Multi-functionality – all parts of the SuDS landscape should be available for use by people when not performing a SuDS function.
- Visual character – all elements of the SuDS design must be attractive (or at least visually neutral, e.g. inlets, outlets and control structures) and safe.

7.5.5 Preliminary biodiversity considerations

There are key biodiversity requirements that should be demonstrated at the Concept Design stage:

- Clean water – 'a controlled flow of clean water' is provided by the use of source control at the beginning of the management train. Subsequent surface conveyance and open SuDS features will ensure connectivity and habitat opportunities.
- Connectivity - habitat connections outside and within the development ensure that plants and animals can travel between habitat areas.
- Topographical diversity – variation in vertical and horizontal structure allows for complex habitat development. This is implicit in SuDS design, e.g. swales, basins, ponds and wetlands.
- Ecological design - the creation of habitats within the development.
- Sympathetic management – through considered management, a mosaic of habitat types can be created, ensuring maximum ecological value.

7.5.6 Management and maintenance

It is important to consider a realistic and appropriate level of ongoing maintenance at the Concept Design stage.

SuDS features that require specialist maintenance, hazardous waste removal or replacement of component parts should be avoided.

Most landscape-based SuDS treat organic pollutants passively through natural processes. This approach encourages the continual breakdown of organic pollutants throughout the design life of the SuDS.

Source control is critical to passive maintenance as silt, heavy metals and heavy oils are trapped at the beginning of the management train where they can easily be removed and will not contaminate SuDS features further down the train. This can enhance amenity and biodiversity potential.

Landscape-based SuDS techniques and surface conveyance ensures that ongoing care can be provided as part of everyday site maintenance by landscape contractors, grounds or park maintenance crews, caretakers or even by residents themselves.

All SuDS features, including inlets, outlets and control structures, must be easily accessible and able to be maintained by landscape care personnel.

LPAs may require a Section 106 Agreement (Town & Country Planning Act 1990) to confirm that maintenance of the scheme will be provided on an ongoing basis. Any requirements for maintenance arrangements should be confirmed with the LPA on a site by site basis.

Replacement

Where the design life of the SuDS component does not surpass the design life of the scheme, then suitable provision must be made for replacement. This includes :

- A methodology for how the item will be replaced whilst maintaining drainage functionality of the site.
- Identification of how replacement will be financed.

It is noted that some SuDS components may need some degree of rehabilitation / dedicated SuDS maintenance, for example, regritting of the joints in a permeable pavement. This is not the same as replacement, which may be required for geocellular tanks amongst other items with a defined design life.

Signposts

NSTS 10, 11 & 12

Non-statutory Technical Standards

Sections 10, 11 & 12

This fully infiltrating SuDS scheme at Burlish School, Worcestershire, utilises the landscape to convey, store and infiltrate runoff requiring only routine landscape maintenance.

Checklist for Concept Design Stage

Design Check	Requirement	
1. Data gathering		
Information to understand site constraints including geology, topography, flood risk, utilities, landscape context, community and wildlife	To understand site constraints that inform Concept Design	
Planning requirements that influence SuDS design	To be aware of planning constraints that impact SuDS design	
2. Flow route analysis		
Existing flow routes	To understand site hydrology	
Modified flow routes	To understand the impact of development	
3. General SuDS design elements		
Collection of runoff	Runoff retained at or near the surface	
Source control	Primary treatment stage to protect the development	
Conveyance	At or near the surface	
Management train	SuDS components in series to manage quantity and quality	
Sub-catchments	Dividing development into discreet SuDS entities	
Storage	Indicate extent and location where runoff is stored	
Flow control	Location to demonstrate storage location	
Outfall	Locations and method of discharge	
4. Quantity		
Confirm interception losses will occur	Demonstrate the use of SuDS components that provide interception losses	
Confirm how rate of flow from development will be reduced to greenfield runoff rates	Demonstrate flow rates are achievable. Increase in allowable discharge rates e.g. brownfield sites only in agreement with LPA/LLFA	
Confirm how runoff will be managed to greenfield runoff volumes	Demonstrate whether Approach 1 or Approach 2 will be used to manage volumes	
Confirm climate change allowance and whether urban creep is applied	Demonstrate additional volumes to be managed	
Confirm 'long term storage'	Demonstrate no increase in runoff from pre-development status	
5. Quality		
Confirm 'treatment stage' requirements	Demonstrate SuDS components used in series to mitigate 'pollution hazard level'	
Confirm source control is present	Demonstrate protection of development to enable amenity and biodiversity benefits	
Confirm interception losses	Demonstrate everyday pollution retained on site	
6. Amenity		
Legibility	An understanding of how the SuDS function by people using or managing the site	
Accessibility	All parts of the SuDS easily reached and safe for recreation and maintenance. Safety by design.	
Multi-functionality	All parts of the SuDS landscape usable wherever possible	
Visual character	All elements of the SuDS design attractive (or at least visually neutral, e.g. inlets, outlets, and control structures) and safe	
7. Biodiversity		
Clean water	'A controlled flow of clean water' within and outside the site using 'source control' and the 'management train'	
Connectivity	Links to outside and within development to ensure plants and animals can travel between habitat areas	
Topographical diversity	Variable vertical and horizontal structures for complex habitat development	
Habitat creation	Exploit opportunities through ecological design	
Sympathetic management	Create a mosaic of habitat types through maintenance	

London Borough of Merton SuDS D & E Guide
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Concept Design

8.0 Design and Planning Stage 2 – Outline Design

Outline Design stage is an opportunity for the SuDS designer to develop the Concept Design to meet the requirements of the LPA and LLFA.

Outline Design bridges the gap between Concept Design and Detailed Design and may require additional information to ensure that all aspects of the design are fully considered.

8.1 Outline Design for planning

The approach to Outline Design can be flexible to cater for different development scenarios.

- Where a large or complicated development is proposed the LPA would expect a pre-application discussion, based on the Concept Design, with recommendations incorporated into Outline Design confirming agreed changes.
- For smaller and simpler developments Concept and Outline design may be combined but the same design process must be demonstrated.
- On speculative submissions, where full access to the site is not possible, a detailed desktop survey of the site must be presented with flow route analysis to demonstrate runoff can be managed effectively on site and discharged to an acceptable outlet.
- A simple assessment of risk using the 'treatment stage' approach is acceptable on low and medium risk development. If the risk screening (SuDS Manual p571) demonstrates that the 'simple index approach' is appropriate, then the 'treatment stage' is acceptable.
- All sites should demonstrate source control to remove silt, heavy metals and hydrocarbon pollution at the beginning of the management train.
- Unless permeable pavement is used to collect runoff, where the pavement provides high water quality treatment, there will usually be a second feature to manage additional volumes and provide additional treatment.

Facing:
The outline design has developed the concept proposals to demonstrate how the scheme works and what it will look like when built. Extract from Outline Design for Holyoaks school, Robert Bray Associates.

8.2 Objectives of SuDS Outline Design

SuDS Outline Design builds on the ideas introduced in Concept Design taking into account comments at pre-application stage and additional information gathered as part of the Outline Design process to confirm with more certainty how the SuDS will be successfully integrated into the wider development prior to investment in full detailed design.

An Outline Design may be submitted as part of an outline planning application to confirm the SuDS scheme is likely to be approved by the LPA and LLFA.

8.3 What Outline Design should demonstrate

The SuDS Outline Design will confirm key aspects of the SuDS design introduced at Concept Design stage, with any subsequent revisions to layout and additional information gathered as part of the Outline Design process.

Outline Design will confirm how the SuDS will function, the scale, depth, relative levels, appearance and character of the SuDS as well as the practicality of the design by demonstrating the following:

- appropriate response to site conditions, constraints and opportunities relating to SuDS
- the layout reflects the Modified Flow Route analysis
- the design will show the appearance of the site and how the site will function
- how runoff is collected, the use of source control and the integration of management train into site layout
- the design will be developed to a stage that confirms it can be constructed practically and at reasonable cost.

8.3.1 Information to support Outline Design

Limited information may be available at Concept Design Stage and must be augmented to provide a full understanding of the site at Outline Design.

The following information should be collated to evaluate site constraints and inform SuDS design:

- Existing services, including location and depth. These can influence layout, depth and placement of SuDS features.
- Planning conditions, for example SuDS in 'conservation areas', which may influence choice of SuDS components and the use of materials.
- Ownership and future management of SuDS will influence component selection, typically adoption by Local Authorities and especially Highways Departments.
- Consents affecting off-site and on-site elements of the SuDS.
- Confirmation of the method of discharge: infiltration or runoff to a watercourse or sewer and impact of runoff volumes on the site.

Confirmation of ownership and maintenance arrangements would be subject to a planning condition.

A biodiversity raingarden at Renfrew Close, Newham with cornfield annuals alongside meadow flora for the future.

8.4 Design criteria considerations

Quantity

The designer should **confirm**

- whether infiltration is appropriate for the site or whether rainfall will be managed as runoff
- whether Approach 1 or Approach 2 is being used to manage volumes
- contributing area of impermeable hard surface
- sub-catchment design
- flow control locations
- storage locations and approximate volumes to appropriate flow rates
- overflow arrangements from each storage location
- exceedance routing when design volumes are exceeded or flows are generated from outside the site
- allowances for climate change and urban creep.

Quality

The designer should **demonstrate**

- there are sufficient SuDS surfaces to meet interception losses requirements
- sufficient treatment is available to manage pollution risk along the management train
- how spillage could be managed
- how runoff could be managed during construction.

Amenity

The designer should **demonstrate**

- the SuDS is understandable to people using the site and maintenance personnel – legibility
- the site is generally accessible to people and safe 'by design'
- the visual character of the SuDS will enhance the development
- spaces and connecting routes are multi-functional and can be used when not providing a SuDS function for rainfall management.

Biodiversity

The designer should **demonstrate**

- confirm that water is clean as soon as possible along the management train using the principle of source control
- demonstrate water is kept at or near the surface as it flows from the beginning to the end of the SuDS management train and then onwards to the wider landscape, to ensure habitat connectivity
- demonstrate ecological design and the creation of habitats within the SuDS corridor
- confirm 'management practices' to enhance habitat development during maintenance.

8.5 Health and Safety by design

8.5.1 The place of water in the landscape

Although there are a number of risks associated with SuDS features, as there are with any landscape design, it is usually the presence of open water that is a concern.

It is important to consider the place water occupies in our everyday lives and its cultural importance.

Water has increasingly become appreciated for its visual, recreational and wildlife value and most people like to see and experience water in the landscape.

The issue of Health and Safety is therefore not one of risk elimination but of developing a design approach that celebrates water whilst managing any real or perceived risk in a way that is acceptable to the community.

8.5.2 Aspects of Health and Safety in SuDS

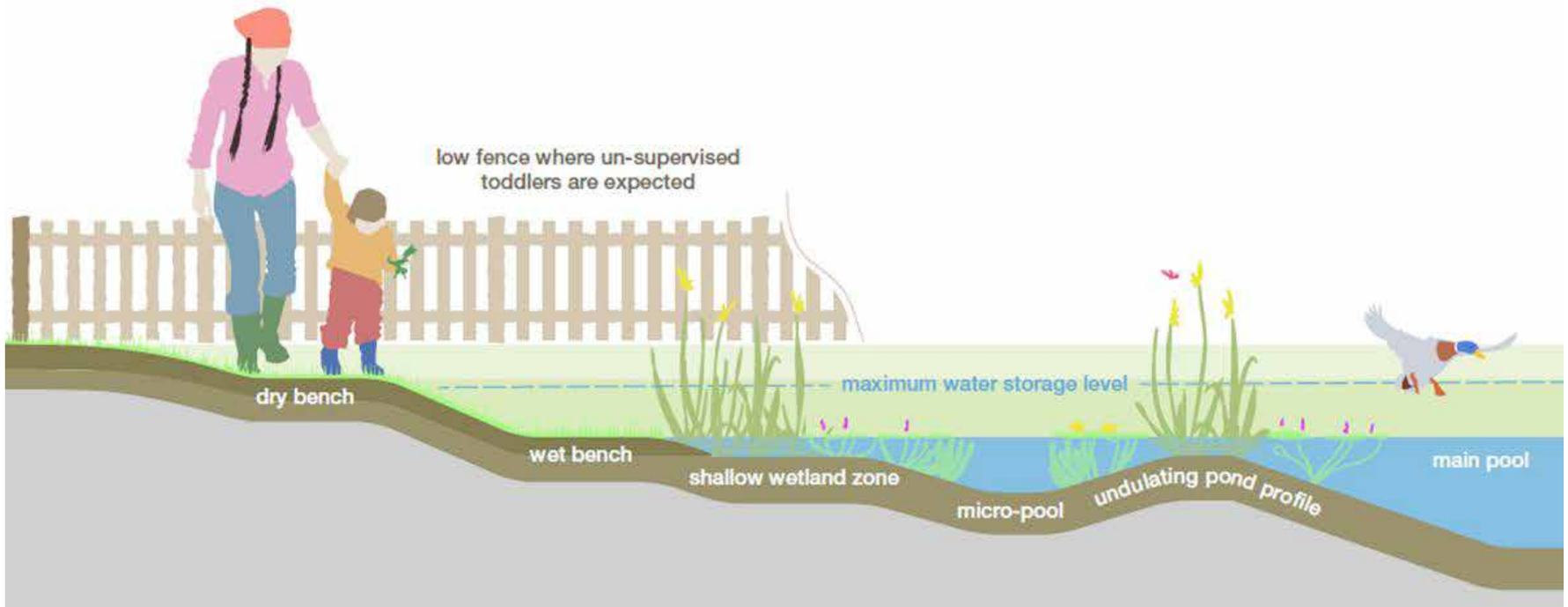
A number of risks associated with SuDS can be identified:

1. **the risk of drowning**
2. **slip and trip hazard**
3. **risk of disease**
4. **risk of toxicity**
5. **infrastructure issues – aircraft (bird strikes), highways, sewers etc.**

This issue is considered in greater detail in the Detail Design section but the general approach to 'Health and Safety by Design' is that all parts of a SuDS design should be fully accessible to people, with each element of the design considered from the health and safety perspective.

The design of the water edge to ponds, wetlands and basins is a good example of where the design allows a person to walk into and out of the feature safely in the design sequence;

A flat dry bench at the edge of the structure: a gentle slope, max 1:3 down to the water: a wet bench at permanent water level: another gentle slope into the water and another underwater level bench before deeper water.



8.6 Affordability

The design of SuDS is influenced by the type of development and how important each component is to the appearance and functionality of the scheme.

An urban renewal project in the city will require a different approach to the visual quality than a simple SuDS design for a suburban layout.

SuDS components are cost effective when compared to conventional drainage but cost savings are only realised through good SuDS design.

A good example of cost effective SuDS design is the use of permeable pavement as a replacement for impermeable surfaces. The cost of the profile construction is marginally more expensive but avoids extensive pipe work, gullies, manhole, dedicated SuDS storage and in some situations oil interceptors. The open graded sub-base provides 30% void storage which is confirmed by a flow control and a low level of maintenance into the future.

Completing a cost comparison for permeable pavement demonstrates the wider considerations of drainage, surfacing and engineering profiles that have to be considered.

Evidence for the cost effectiveness of SuDS can be found here: http://www.susdrain.org/resources/evidence.html

8.7 Management of the SuDS resource

The future maintenance of SuDS is influenced by design. Wherever possible the idea of 'passive maintenance' should be considered with SuDS components integrated into the everyday management.

Although there will be situations where dedicated SuDS components are appropriate e.g. a pond or wetland, many SuDS features can be incorporated into multifunctional space e.g. courtyards, play basins and recreational space.

In other locations a SuDS feature can contribute to landscape infrastructure e.g. the 'rain garden' or 'bio retention' element in design.

Wherever possible maintenance should be allocated to site care rather than SuDS management.

This reduced dedicated maintenance obligation can sometimes be reduced to just checking inlets, outlets and control structures.

Design Note :

Well designed SuDS are not 'land hungry' in that they can be integrated into both hard and soft landspace spaces which are available within development. Making SuDS cost effective reinforces the requirement to consider SuDS layout at Concept Design stage.

8.8 Outline information required for SuDS evaluation

8.8.1

The information required at Outline Design stage will depend on whether a Concept Design has been provided and the level of information included at that stage.

The design information should be provided in plan form, confirming site layout and SuDS infrastructure together with a SuDS Design Statement presenting all information that cannot be conveyed on plan.

The Outline SuDS Design will show what the scheme will look like, how it will function and confirm any additional information provided since Concept Design Stage.

8.8.2 Outline Design – information checklist

Information recommended in the LASOO (Local Authority SuDS Officer Organisation) Practical Guidance

- Flood Risk Assessment (FRA) – a review of critical elements
- Outline Design Strategy Statement
- Outline Design Plan – layout
- the plan will incorporate preliminary landscape proposals
- ground investigation review
- evidence of third party agreement for consent to discharge or agreement in principle.

Additional information to inform evaluation of the scheme:

- topographical information and flow route analysis
- destination and discharge route of rainfall via infiltration or runoff
- infiltration investigation results where appropriate
- existing utilities plan confirming existing watercourses or sewer locations
- sensitive receptors for runoff where appropriate e.g. SSSIs
- offsite works that may be required
- general maintenance principles
- design life of any products used and requirements for potential replacement.

8.8.3 Design checklist

- type of runoff collection to ensure runoff is at or near the surface
- source control type and location
- management train – SuDS components in series – extent and expected critical levels
- sub-catchment boundaries with flow control locations
- storage locations, extent and critical levels
- conveyance – ideally at or near the surface
- landscape character – the nature of the development and how SuDS is integrated into site design
- biodiversity – opportunities for wildlife, clean water, connectivity and habitat design
- manageability – maintenance by design.

Facing: Australia Road, by the authors.

Springhill Cohousing Stroud, Robert Bray Associates.
An early example (2004) of integrated SuDS design with permeable pavement collecting, cleaning and storing rainfall in the upper SuDS sub-catchment.

9.0 Design and Evaluation Stage 3 – Detailed Design

The SuDS strategy will be reasonably fixed by Detailed Design stage. The management train, selection of SuDS features and general means of storing runoff will have been evaluated and defined at earlier design stages.

The development and refinement of Concept and Outline designs at Detailed Design stage will demonstrate that the project objectives can be delivered upon and will be presented with either the detailed planning application or to discharge planning conditions, or reverved matters, depending upon the requirements of the LPA.

Competent design details ensure that runoff is collected, conveyed, cleaned, stored, controlled and discharged from site in an effective manner that provides wider benefits.

Failure of individual elements of the design can:

- invalidate expected storage volumes and flow rates
- prevent adequate treatment
- negatively impact or miss opportunities to contribute to amenity use
- create hazards to wildlife or miss opportunities to support biodiversity
- cause local ponding, flooding and inconvenience to the public
- increase maintenance difficulty and cost.

Grey to Green project, Sheffield City Council. Groundbreaking project integrating SuDS into the heart of Sheffield, replacing redundant roadway with exciting planting, to a sequence of landscape cells leading to the River Don.

9.1 Objectives of Detailed Design

Detailed Design should develop and refine the agreed SuDS strategy from the Concept and Outline design stages. Outputs from the detailed design should:

- provide sufficient information to give the LPA and LLFA a full understanding of how the scheme will appear and operate
- meet the requirements for NPPF and NSTS along with Local SuDS Standards and SuDS related planning policies
- confirm how the SuDS scheme maximises opportunities for amenity and biodiversity
- deliver schemes which are legible and function passively.

9.2 What Detailed Design should demonstrate

The SuDS Detailed Design considers in detail all the influencing factors on the scheme with over-arching requirements as follows:

- the use of Source Control techniques provides a controlled flow of clean water through the site
- demonstrate that the modified flow route(s) provides for extreme flows and where possible connectivity corridors for biodiversity through the site
- carefully consider all site levels to ensure that the system will function as intended in 'day to day' and also extreme conditions
- demonstrate that individual SuDS components meet respective design criteria
- proportionate analysis to confirm attenuation volumes with allowances for climate change and urban creep, and controlled flow rates for each sub-catchment and final site discharge rates
- materials and plant varieties specified accord with local landscape character
- demonstrate safe design for contractors, operatives and general users of the site
- that SuDS which are being offered for adoption meet the relevant standards of the adopting body.

Design Note :

Schemes invariably evolve and change from concept stage. The designer should therefore confirm no material changes to drainage strategy from that agreed with LPA at the Concept or Outline design stages. Any materials changes should be discussed and agreed with the LPA prior to detailed design submission.

9.3 Typical Detailed Design package

The Detailed Design package should be proportionate to the scale of the development and will generally encompass a design statement with accompanying drawings. Supporting information including calculations, maintenance plan and risk assessment will also be required.

9.3.1 SuDS Design Statement

The SuDS Design Statement should cover SuDS provisions on quantity, quality, amenity and biodiversity and how opportunities provided by the site have been maximised along with addressing the following:

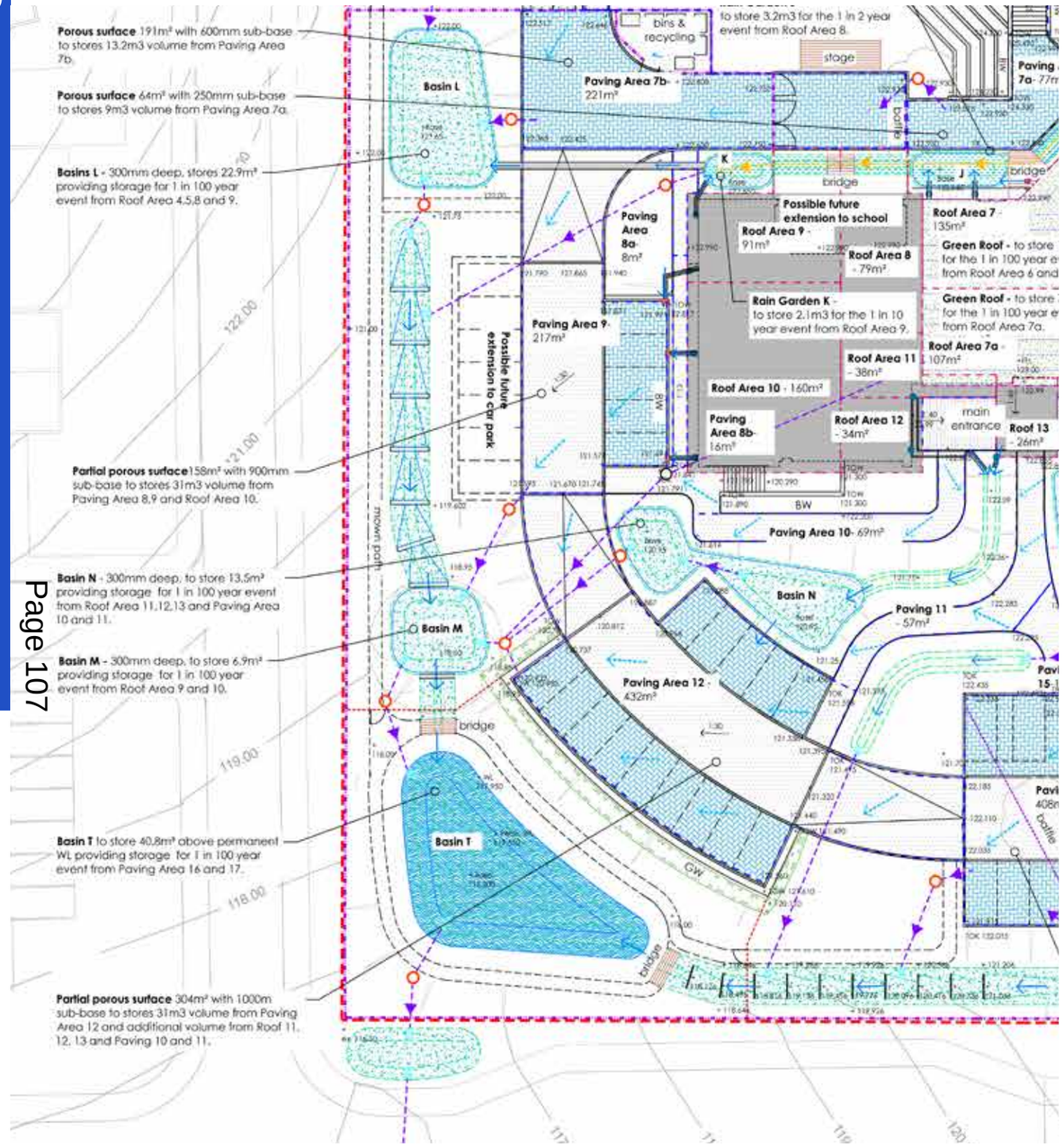
- confirm drainage design criteria agreed with LPA. For example, rainfall return periods, discharge allowance, traffic loading requirements etc
- summarise the findings of the FRA and highlight any other significant site constraints
- outline how requirements of NPPF, NSTS, local SuDS policies, requirements for multi-functional use of SuDS space and local objectives for sustainability including climate resilience are dealt with
- explain how SuDS will function passively in terms of treatment and management
- outline details of any offsite works required, together with any necessary consents.

9.3.2 Drawing package

The SuDS drawing package should include the following:

Design information drawings	Topographical survey of the site Coordinated constraints map identifying all potential design constraints including areas of flood risk (fluvial, pluvial and ground water), contaminated land, archaeological significance, poor ground conditions, unexploded ordnance (UXO), presence of invasive species, protected habitats, tree Protection Orders (TPO) and root protection zones (RPZ). [note : list is not exhaustive] Existing utility services drawing. Details of existing site surface water drainage infrastructure and ownership established Plan of site detailing flow routes including exceedance flow routes, subcatchment boundaries, flow control locations, storage locations, contributing impermeable area, and phasing where appropriate; Drawing of site drainage catchment areas showing permeable and impermeable areas within defined subcatcatchments.
Design drawings	Detailed site layout at an identified scale (1:200 or 1:500 or as appropriate or any other scale agreed) including a North direction arrow. Long sections and cross sections for the proposed drainage system, including surrounding site level and proposed finished floor levels (where appropriate) Construction Details – inlets, outlets, flow controls, storage, edge details, connection details to receiving watercourse / sewers / public surface water sewers / highway drains; Planting arrangement and surface treatment / materials drawings where detailed not included on other drawings. Critical design levels should be identified on all relevant drawings.

Facing:
Rectory Gardens Rainpark, Hornsey.
A small public park that collects polluted road runoff through silt forebays and underdrained infiltration basins that discharge clean water slowly to the River Moselle.



Plan excerpt: proposed new Holyoaks Primary School, Redditch. The detail design stage confirms the layout, character and function of the SuDS, Including detailed levels, volumes, flow controls and component design.

9.3.3 Supporting information

Depending on the nature of the scheme various investigations, tests and calculations may need to be performed along with obtaining necessary consents:

- Ground investigation, including infiltration test results, soil testing and groundwater monitoring as appropriate.
- Design calculations which demonstrate compliance with the design criteria for the site including all hydraulic and structural calculations for permeable pavements and underground storage structures as appropriate.
- Completion of standard design information forms as may be provided by the LPA.
- Details of any offsite works required, together with any necessary consents in place (or can be obtained).
- Confirmation that discharge consents are in place (or can be obtained): Environmental Permit (Environment Agency) - an Environmental Permit may be required for works in, under, over or near a main river (including where the river is in a culvert), works on or near a flood defence or for works in the flood plain of a main river; Ordinary Watercourse Consent (LLFA) for any structure with the potential to affect flows in an ordinary watercourse; highway drain (Highways Authority); or with Sewerage Undertaker for any connections to the public sewer. Discussions should be held with EA for Infiltration within Source Protection Zone areas or higher risk sites; Local Authority and Inland Drainage Board byelaws, comments and constraints.
- Proposed maintenance schedule and confirmed management arrangements for all non adopted drainage. Identify any proposed split of the SuDS between private (curtilage) and public (open space or highway) land.
- Designers hazard and risk assessment- to consider construction, maintenance and operation by personnel and day to day site use by public.
- Details of any informative signage proposed for SuDS.

9.3.4 Detailed Design Evaluation Checklist

The following table provides a list of key considerations for design and evaluation.

The CIRIA SuDS Manual Table B.3 provides other aspects for checking which may be incorporated on a case by case basis.

Deliverable	Key design points	Key evaluation points	Responsibility to check
Design standards	Designers should confirm how all standards have been achieved for quantity, quality, amenity and biodiversity.	Confirm allowable attenuation rates. Confirm amenity and biodiversity requirements.	LPA
Confirm method & locations of discharge	Where positive discharge is made to a watercourse / sewer, consider likelihood of surcharge on storage from the receiving sewer / watercourse. Infiltration – outline how ground will be protected from compaction during construction.	Review the level at which water is stored relative to receiving flood plain levels/sewer invert. Infiltration – review how groundwater table level has been confirmed and how ground will be protected from compaction during construction. Review risk of infiltrating close to buildings. Review how infiltration on brownfield sites has been assessed.	LLFA
Hydraulic calculations	Detailed checklist is contained Section 9.5.10.	The level of analysis required should reflect the risk of failure, scale of development and complexity of drainage.	LLFA
Detailed consideration of site and drainage design levels	Levels are crucial – check that there are no locations where low points might compromise design. Designer to present drawing showing detailed levels across the site	Sensibilty check to be performed for each subcatchment, comparing top level of storage, and lowest level of contributing areas.	LLFA
Drainage details	Minimise risk of blockage by designing protected outlets and flow controls	Review of inlets, outlets, flow controls, storage, edge details, connection details to receiving watercourse / sewers	LLFA
hydraulic calulations & drawing volumes match	Drawings should confirm volumes provided and refer back to hydraulic analysis requirements. Drawings references / annotations should clearly relate to calculations.	Sensibility check to be performed to ensure that sufficient storage is provided to meet hydraulic calculations.	LLFA
Designers hazard & risk assessment.	To consider construction, maintenance / operation by personnel and day to day site use by public.	Demonstrate safe design for users and operatives of the scheme.	LPA & LLFA
Long sections and cross sections	Cross sections should not use exaggerated vertical scales to allow proper understanding of how scheme will actually look	Review in general, side slopes and depths shown.	LPA & LLFA
Planting design & schedule	Outline any SuDS specific planting requirements.	Ensure plants from accredited source to minimise risk of invasive species.	LPA & LLFA
Landscape design drawings	Integrate SuDS within the wider landscape design	Check that the SuDS network is accessible, multifunctional and contributes to the overall landscape quality.	LPA & LLFA
Consents & permits	Vary and can include: discharge consents; offsite works & 3rd party access consent. The list of required consents may be initially defined at pre-app discussion.	Check that relevant consents are in place or can be obtained in principle.	LPA & LLFA & EA & IDB & WASC
Maintenance	Key plan (1 side of A4) detailing the maintenance regime and identifying key maintenance locations such as outlets and flow control locations.	Maintenance type & cost is appropriate & proportionate and features are easily accessible. Design achieves passive maintenance where possible.	LPA & LLFA
Adoption arrangements	Confirmation of commitment to adopt aspects of the scheme being offered for adoption. Confirmation of ownership and maintenance responsibilities for all parts of the SuDS scheme which are not being adopted.	Review that sufficient safeguards are in place for the long term maintenance and operation of the drainage. Consider the potential impact of replacement of propriety products.	LPA, LLFA, WaSC & Highways & IDB & WASC

London Borough of Merton SuDS D & E Guide
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9.4 Critical levels

Levels are important in any drainage system and especially so for surface based SuDS. The proposed surface levels should align with the modified flow route analysis in providing a flow path across the site and storage volumes can be significantly affected by inaccurate levels.

The following levels should be evaluated when developing or reviewing a design:

- The flow control invert level relative to storage - the flow control should not be situated above the base level of the storage component unless there is a requirement for permanent or semi-permanent water.
- The overflow level should demonstrate that the required volume of storage is contained between the flow control invert level and the overflow level.
- Areas contributing to a storage component should not be situated below the top level of storage as they may flood prior to the storage being filled.
- For storage components that are sloping, such as permeable pavements or linear basins, the 'effective' storage should be determined rather than the entire volume of the structure.
- A review of site levels should not identify any obvious obstructions along exceedance flow paths.

Note :

The LLFA will carry out a high-level review of levels only - Liability for design is retained by the designer in all cases.

Facing: Accurate levels were critical at Bewdley School Science Block.

Grey to Green project, Sheffield. The 3 flow control criteria: low flow, overflow and exceedance are demonstrated elegantly here.

9.5 Designing for hydraulic requirements

Development causes an increase in runoff which increases the risk of flooding on site and elsewhere. Where runoff is temporarily stored it allows for a controlled release either into the ground or into a watercourse or sewer.

The storage volume required can be estimated using information such as the local rainfall characteristics and the rate at which flow is controlled to leaving the site.

Expressing calculation outputs in an understandable format allows for easy application within the design process as well as transparency for evaluation.

9.5.1 Objectives of hydraulic calculations

Hydraulic calculations can:

- inform and validate the SuDS design
- provide confidence that there is sufficient capacity to cater for the additional runoff generated by the development to desired design standards
- make allowance for unknown factors such as potential for runoff from off-site
- provide confidence that SuDS will function hydraulically and will not be prone to erosion.

9.5.2 What calculations should demonstrate

Designers should demonstrate through the calculation process:

- how the rates and volumes of runoff generated from development will not pose a flood risk within site boundary or elsewhere
- that future impacts to runoff such as climate change and urban creep are accounted for
- that the correct calculation inputs and processes have been used
- where exceptional flows are experienced, such as; design exceedance, instances of blockage, or flows from offsite, they can be managed within flow routes without causing unreasonable risk to humans or development.

9.5.3 Calculation processes

Calculations used in SuDS design should always be viewed as estimates of what is experienced in reality. Calculation outputs will vary depending upon how inputs are selected and the calculation process used.

The calculations for SuDS design are used to assess:

- appropriate discharge rates via infiltration or controlled discharge rates to a watercourse or sewer
- the volume of runoff that requires storage to allow infiltration or attenuation to controlled discharge rates (see 9.6)
- the long-term storage volume that needs to be managed (see 8.4.7)
- flow velocities.

There are a number of methods that can be used to carry out the calculations including manual calculations, spreadsheets, online tools and a variety of hydraulic modelling software packages.

Calculation processes are summarised in the following table:

Calculation process	Purpose of calculation	Main calculation inputs
Runoff rates from greenfield and brownfield sites estimate	Used to define flow control rate	Local rainfall data; site area; soil characteristics.
Attenuation storage or infiltration storage estimate.	The runoff generated by the site is balanced against the controlled rate of outflow.	Local rainfall data; site area; proposed site impermeable area; climate and creep adjustments; infiltration rates; soil characteristics; discharge rate(s).
Long term storage estimate	Determining the difference in the volume of runoff between pre-development and post development scenarios	Local rainfall data; site area; existing site impermeable area; proposed site impermeable area; infiltration rates; soil characteristics; rain harvest volume, losses provide by SuDS, proposed discharge rate(s).
Flow velocity check	Flow velocity calculated to ensure: Conveyance along vegetated channels do not cause erosion; Low flow velocities for 1 in 1 year rainfall to allow settlement of silt.	Component sectional geometry; component gradient; component surface type (roughness); proposed flow rates.

9.5.4 Calculation inputs

9.5.4.1 Rainfall data selection

Rainfall depths and intensities for a range of return periods and storm durations is one of the key calculation inputs.

The choice of rainfall data can have a significant effect on the volume of storage calculated.

FEH 2013 rainfall data is considered the most up-to-date data availabale and therefore recommended for use.

Where FSR rainfall values are used the designer must demonstrate that rainfall values are consistent with FEH 2013 data.

FEH 2013 rainfall data can be sourced online at fehweb.ceh.ac.uk

9.5.4.2 Defining runoff coefficients (Cv)

In extreme rainfall conditions the losses anticipated from hard development surfaces such as roofs or paved areas are anticipated to be minimal.

The designer must evaluate the runoff coefficient (Cv) for the types of surfaces contributing runoff to the storage location. Sewers for adoption (Section C5.1) recommends assuming 100% runoff from impermeable areas which equates to a Cv of 1.0.

Runoff coefficients of 0.95 for roofs and 0.9 for paved areas would be considered acceptable by the LLFA where drainage is not being adopted by a Water and Sewerage Company (WaSC).

Some modelling software packages contain 'Default' Cv values (0.75 Summer, 0.84 Winter) which assume that there will be 25% summer and 16% winter losses from hard surfaces.

These default values should not be used for storage estimation calculations.

The designer must justify where a Cv of less than 0.9 is used for calculations.

Where a reasonable amount of permeable surface contribution to SuDS storage, then this should be considered within calculations. The 'UKSuDS' website was recently updated to allow input for permeable surface runoff contribution within attenuation calculations.

9.5.4.3 Making allowances for interception losses

As a rule of thumb, where the total wetted area of SuDS components equates to at least 25% of the development area (all buildings and hard surfaces) then it is acceptable to make an allowance for interception losses.

This loss can be applied within storage calculations by reducing the rainfall depths by 5mm.

For more detailed analysis methods see SuDS Manual Section 24.8

9.5.4.4 Defining infiltration rates

The specified infiltration test methodology should be representative of the proposed design.

The depth of water and depth of test trench below ground level should seek to replicate the attributes of the proposed infiltration system.

For example, tests should not be undertaken 1.5m below ground level when shallow infiltration is proposed from permeable pavement, rain gardens or basins which will be located close to ground surface.

Bromsgrove Civic Centre re-development. Permeable block and slab paving with a central grass detention basin provide a fully integrated infiltrating SuDS scheme.

9.5.4.5 Defining attenuation flow control rates

LPAs require that SuDS attenuate runoff from all sites (Greenfield and Brownfield) to equivalent greenfield runoff rates. There are 2 primary methods for controlling rates as follows (see Section 6.4.3.5):

- **Approach 1** - where the volume of runoff is controlled, the rate of outflow is controlled to the 1 in 1 year and 1 in 100 year greenfield runoff rate.
- **Approach 2** - where the volume of runoff is not controlled the rate of outflow for all rainfall events is controlled to Qbar/Qmed.

NSTS S2,S3 and S6

Qmed / Qbar rates are anticipated to be in the region of 2-7 litres per second per hectare (l/s/ha) depending on local rainfall and soil characteristics.

FEH methods are now preferred for estimating Greenfield runoff rates. Care must be taken when selecting the catchment to define descriptors to ensure that a small localised catchment is selected.

The IoH124 method has been superseded by the FEH methods.

In most cases the value derived from IoH124 method is similar to FEH methods and due to its common usage IoH124 values will be accepted by the LLFA until FEH methods become more commonplace.

Further notes on the application of the different methods are listed below:

- **FEH ReFHv2** – analysis should ensure that there is no urbanised component within the runoff estimate. The flow rate for any return period can be derived using the ReFHv2 software. The peak rate of catchment runoff is factored back to the site size to establish the greenfield runoff for the site.
- **FEH statistical** method requires the designer to establish Qmed (SuDS Manual EQ.24.2) using FEH catchment descriptors and then undertake a pooling analysis to derive flow rates if 1 and 100 year flow rates are required.
- Establishing Qbar using **IoH124** (SuDS Manual EQ.24.3) is based on 50ha area input and then factored down to the size of the site. Where Approach 1 is used, the 1 in 1 and 1 in 100 year Greenfield runoff rates should be calculated by factoring the Qbar rate using growth curve factors. (SuDS Manual Table 24.2)

Design Note:

Regional maps may not be representative of site soil conditions and calculation inputs may have to be adjusted accordingly.

9.5.4.6 Accounting for Climate Change

Future predictions suggest that more extreme rainfall events will occur with greater regularity.

To make allowance for this within SuDS calculations the current industry approach is to factor up rainfall intensities for **Climate Change Allowance**.

Flows in excess of the storage capacity of SuDS components should be directed along modified flow routes. When the sensitivity test indicates potential for flows across the surface, the designer should evaluate likely flood volumes, depths and velocities to ensure there is no significant risk to development or people. Generally, depths less than 0.25m will not present a risk, but steep parts of sites may generate high velocities which may be unsuitable.

Table 2 from the DEFRA Guidance on climate change is replicated below with additional advisory notes on how the upper end and central projections should be applied:

	Design life 2015-2039	Design life 2040-2069	Design life 2070-2115
Upper End Projection Carry out sensitivity test. Where unacceptable flood risk to site or adjacent sites is identified Upper End Projection allowances must be incorporated into design (i.e significant flood depths on site during this event could present a danger to people)	10%	20%	40%
Central Projection These represent the Minimum climate change allowances that can be adopted where sensitivity tests demonstrate that no unacceptable flood risks are introduced by not allowing for Upper End Projections.	5%	10%	20%

Design Note:

Climate Change should be considered for both attenuation storage and conveyance calculations.

Detailed Design

9.5.4.7 Accounting for Urban Creep

Urban Creep considers the potential impact on the drainage system from permitted development such as paving over front gardens to create driveways. Permitted development rights generally applies to residential development but can also apply to commercial development and schools.

The following table is taken from LASOO Guidance document and defines the anticipated percentage increase to impermeable area:

Paving over front gardens with impervious surfaces is increasingly common. This example could easily have been permeable block paved.

	Residential development density (dwellings per hectare)					
	≤ 25	30	35	45	≥ 50	flats & apartments
Percentage area increase applied as percentage of proposed impermeable area within curtilage of private lands.	10%	8%	6%	4%	2%	0%

For housing developments designers should calculate the number of properties per hectare and apply the percentage increase to non-adopted impermeable areas, for example roofs, pathways and driveways.

Urban creep allowance for commercial developments and schools should be agreed with the LLFA at pre-application stage.

9.5.5 Calculating storage requirements

Runoff rates and volumes can be managed by either infiltration or controlled discharge.

Infiltrating runoff through the soil into underlying geology is the first preference. Where soil, geology or ground conditions do not enable infiltration, then attenuating flows and volumes to controlled discharge rates would be appropriate.

Both infiltration and attenuation require storage within the development to hold water long enough to be discharged either into the ground or through flow-controlled discharge to a watercourse or sewer.

Sections 6.4.3.1 and 6.4.3.5 cover the basics of infiltration and attenuation storage calculation and should be referred to prior to progressing with this section where calculation inputs are considered in more detail.

9.5.5.1 Infiltration

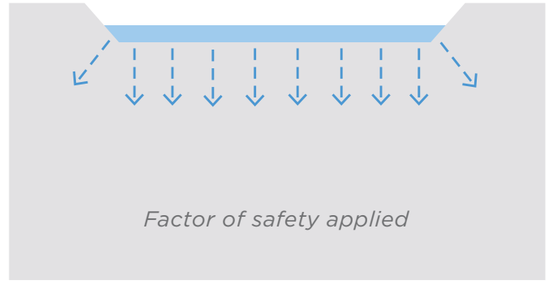
There are two methods for calculating temporary storage for infiltration.

The CIRIA 156 method assumes that there will be infiltration through the base and sides of the structure on an ongoing basis. Factors of safety ranging between 1.5 and 10 depending on the consequence of failure, and the area draining to the infiltration structure (see C753 Table 25.2), are allocated to account for potentially reduced infiltration over time.

The BRE 365 method assumes that the base of the system, such as traditional soakaway, will silt up and therefore infiltration is only calculated through the vertical sides. The assumption of no infiltration through the base is the equivalent of the factor of safety.

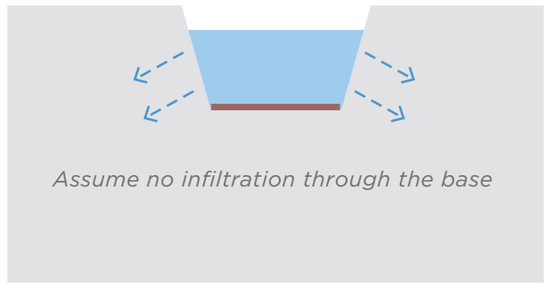
It is noted that various systems such as permeable pavement are resilient to siltation. However, infiltration schemes are not straight-forward and sites which are free draining can quickly become compacted during the construction phase.

CIRIA 156 method



Factor of safety applied

BRE 365 method



Assume no infiltration through the base

9.5.5.2 Attenuation and long term storage

Approach 1

For Approach 1, some runoff must be retained on site for a longer period after attenuation storage has emptied to mitigate for the increased runoff volume generated by the development. (NSTS S4)

There are a number of ways to reduce and manage the volume of runoff generated by development as follows:

- **Rain harvesting** - Where it can be demonstrated that the harvesting system will be in use for the majority of time and demand exceeds supply, 50% of the rain harvesting volume can be offset against the long-term storage volume requirements. (BS 8515:2009)
- **Natural Losses** – For SuDS components which provide natural losses a 5mm reduction can be applied to rainfall depths to account for interception losses. To demonstrate potential for sufficient interception losses, a ratio of 'SuDS space' to 'developed area' of 1:4 would be considered acceptable by LPAs. Where SuDS components are unlined, some infiltration may occur even if rates are very low. These additional losses can be offset against the long-term storage volume requirements.
- **Separate area of storage** - A separate area of storage can be provided. There are no set procedures on how frequently long term storage is utilised.

It is prudent for areas which serve other purposes such as carparks or playing fields not to be inundated on a regular basis.

The 1 in 30 year event is suggested as the point at which these areas would be first utilised for storage.

In other locations such as raingardens and long term storage basins within pond complexes the frequency of fill may be much more regular - i.e. they will be inundated for rainfall events less than 1 in 30 year.

Outflow from Long Term storage area should be via infiltration or a controlled discharge rate of 2 l/s/ha.

Design Note:

Infiltration tests where low rates of infiltration are anticipated may have to be specified over a period greater than 24 hours

Approach 2

Where volumes cannot be managed to predevelopment status, then outflow rate should be controlled to a maximum of Qbar rate (which is equivalent to a 1 in 2 year or Qmed which is used by FEH methods) for all rainfall return periods up to the 1 in 100 year rainfall event plus climate change allowance.

This is the approach most commonly utilised by industry at present due to simplicity of analysis, but can result in a greater storage requirement due to more restricted outflow rates. (NSTS S6)

Riverside Court, Stamford.
Permeable pavement delivers a controlled flow of clean water to landscape canal and rill features and to the River Welland.

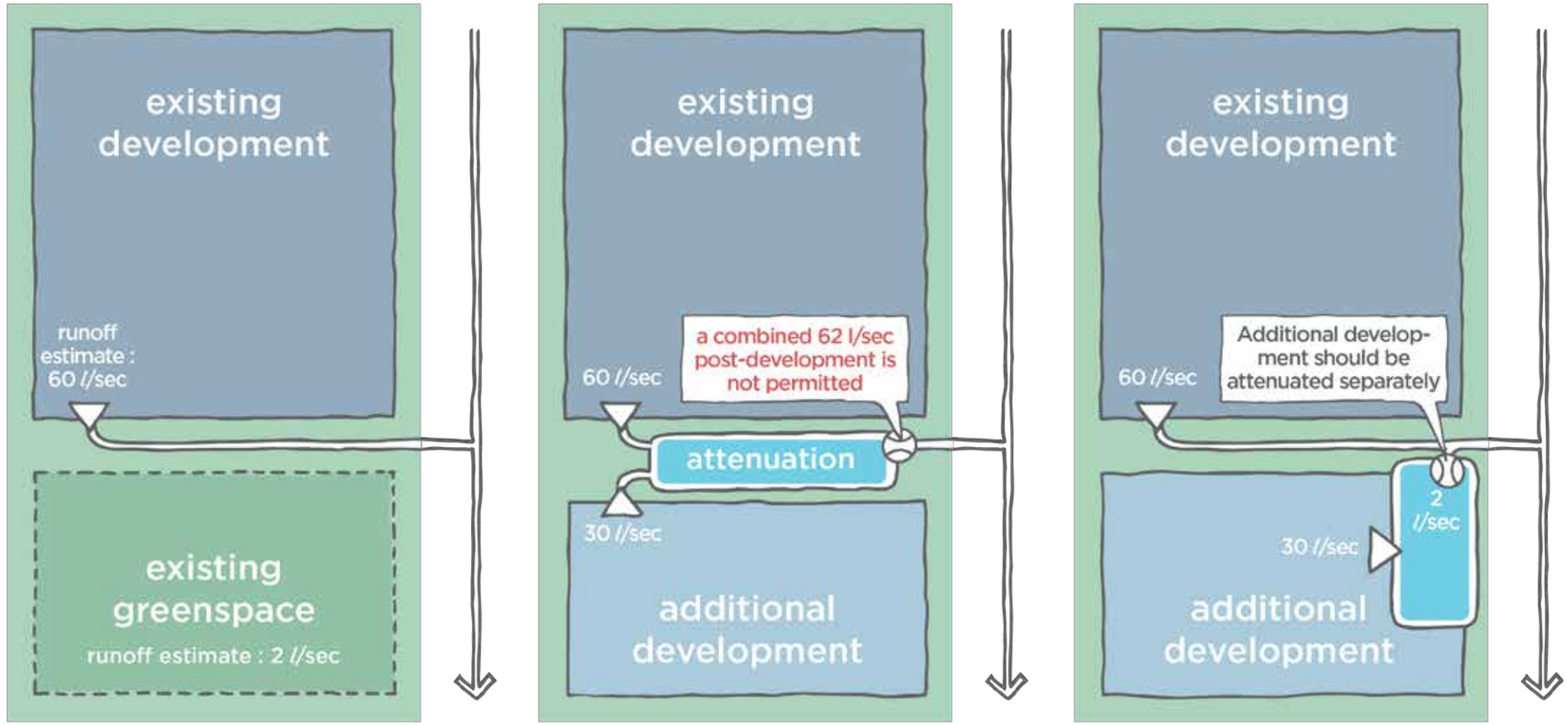
9.5.6 Managing runoff rates from Brownfield sites

On Brownfield sites (also known as Previously Developed Land or PDL), if infiltration of the 1 in 100 year rainfall event is not possible, the rate of discharge should be reduced to greenfield runoff rates. Where greenfield rates cannot be achieved, the designer must demonstrate why reduction in rate is not achievable. The designer will be required to demonstrate that they have explored all options for storage including the use of storage on roofs (e.g. blue-green roofs), permeable pavements, and the use of appropriately designed underground storage. (NSTS S3 and S6.)

Not all planning applications comprise a complete redevelopment of the site, and only a small parcel of the overall site may be planned for re-development. On such occasions LLFA will not expect the entire development to be returned to greenfield runoff status.

In these circumstances LLFA will not accept the combining of the greenfield runoff rate for the development parcel with the existing impermeable runoff rate from the remainder of the site when the designer is undertaking storage calculations.

The existing development remaining intact and the parcel of land proposed for development should be treated separately in terms of calculations and drainage strategy.



Facing: The Islington, Ashby Grove Raingarden. A raingarden for a single property with control tube and overflow that can manage the 1 in 100 year return period rainfall event.

Designers should provide the following:

- the net increase in impermeable area
- greenfield runoff rates are calculated based on the area of the redevelopment parcel and not the wider development
- storage requirements for additional impermeable area based on outflow controlled to greenfield rates for the development parcel.

9.5.7 Designing for exceedance

The designer must demonstrate that extreme flows, beyond design parameters, can be managed in a safe and predictable manner. Site levels should be designed to allow exceedance flows to flow from one storage location to the next along a defined management train/conveyance route.

9.5.8 Managing off-site flows

Many sites are at risk of significant surface runoff from offsite with indicative flow routes identified by Surface Water flood maps.

SuDS design should demonstrate how offsite flows are intercepted and managed through the site without causing flood risk to the site or increasing flood risk elsewhere. Unless specifically required by LPA / LLFA developers are not required to attenuate flows which are generated from off site. This advice may be revised in exceptional circumstances which will be determined on a case-by-case basis.

EA Flood maps - www.flood-warning-information.service.gov.uk/long-term-flood-risk/

9.5.9 Flow velocities

Peak flows should be retained to less than 1m/s velocity to avoid risk of erosion of vegetated surfaces such as swale channels.

Where velocities are less than 0.3m/s this will encourage silts to drop out of flow along the Management Train.

The Manning's Equation (SuDS Manual EQ.24.12) is used to estimate open channel flow velocities. The depth of flow will affect how much 'roughness' is applied by the channel. The SuDS Manual Figure 17.7 details the manning's roughness values which should be adopted for SuDS calculations.

Lamb Drove, Cambourne, Cambridgeshire.
Levels of pathways and roads can be adapted to allow for a simple cascade of flow from one SuDS component to the next in the event of exceedance or inlet blockage.

Facing: At this development flow rates have not been managed within the conveyance system, requiring rock reinforcement of the swale to reduce erosion.

Below: The amenity plan basin and low flow channel have a flow control before water continues along a conveyance swale.

9.5.10 Calculation checklist

Key calculation inputs and outputs should be presented in the 'Flows and Volumes checklist' (see appendix). The following checklist identifies useful calculation checks:

Parameter	Guidance on design/calculation input	Information for technical assessment
Rainfall data.	FEH 2013 rainfall data preferred. Where FSR rainfall data is used, conversion factors should be applied to bring in line with FEH rainfall data.	Confirm the rainfall source and any conversions applied to data.
Areas generating runoff	All area of contributing runoff should be represented within the storage calculation. The designer must justify where a Cv of less than 0.9 for impermeable area is used for calculations.	Provide a drawing clearly identifying the areas of surface runoff contribution within each subcatchment. Designer to state Cvs used and justify use of Cv less than 0.9.
Maximum flow control rate	Statutory authorities e.g. LLFA, sewerage undertaker, IDB or EA, might place restrictions on the outfall flow rates based on the available capacity of receiving infrastructure.	The flow control rate should be identified along with the method for defining the rate.
Climate change allowance	CCA has been applied within calculations based on design life of development and any applied sensitivity assessment.	Designer to justify selection of CCA based on development type and design life.
Urban creep	Urban creep allowance applied to non-adoptable impermeable areas on developments where permitted development is likely to occur.	Designer to justify selection of Urban Creep percentage
Initial interception losses	As a rule of thumb, where the area of development is no greater than 4 times the SuDS wetted area, a 5mm allowance may be made for interception losses for each m^2 of development.	Designer to confirm whether 5mm interception losses have been applied in calculation.
Critical duration	A range of rainfall durations must be considered when calculating attenuation storage.	Designer to demonstrate that sufficient rainfall durations have been considered to achieve worst case scenario.
Control of runoff volume	Where the designer demonstrates that water can be 'lost' or stored separately Approach 1 can be applied for the control of flow being discharge from the site.	Designer to confirm how volume of runoff has been controlled.

Parameter	Guidance on design/calculation input	Information for technical assessment
Modelling of the SuDS layout.	It is not anticipated that SuDS design will require modelling of extensive piped systems. In some instances where the scheme is relatively small and not hydraulically complex standard calculations will be accepted in lieu of a hydraulic model. Layout drawings should be clearly labelled with the numbering convention used by models.	The designer is to justify where no hydraulic modelling is undertaken. Calculations/model outputs should be provided to support the Flows and Volumes proforma
Outfall design	Outfalls into receiving sewers or watercourses can be at risk of surcharge and lack of free discharge due to elevated water levels. This can result in additional storage being required. Free discharge should not be assumed. The risk of surcharge should be assessed and accounted for within calculations as appropriate.	Designer is to indicate whether SuDS storage calculation is likely to be influenced by high water levels at the point of discharge.
Long section	Long sections will allow detailed consideration of levels across the site.	Long section showing peak water levels.
Erosion check	Flows along swales (or other vegetated surfaces) are at risk from erosion. Peak flow velocities should be less than 1 - 2 l/s. Concentrated inlet points are also prone to erosion.	Designer to demonstrate that they have considered risk of erosion and taken measures to safeguard scheme. Peak flow velocity calculations to be provided as appropriate.
Designing for exceedance	The design should incorporate overflows at each SuDS component. Hydraulic calculations should demonstrate that overflows have sufficient capacity to deal with anticipated flow rates. SuDS layout drawing should identify the anticipated flow route for exceedance events.	Locations of overflows should be identified on the layout drawing along with proposed exceedance flow route.
Managing flows from off site.	The FRA should identify the potential for flows from offsite. These flows can be unpredictable and difficult to quantify. Management of flows through the site should not increase flood risk elsewhere. Detailed modelling to establish the rates of flow anticipated would not be considered compulsory (but may be required on a case by case basis).	The designer should demonstrate how anticipated flows from off site will be managed through the site using the layout drawing and design statement.
Consistency of calculations and design.	Detailed design of SuDS components should reflect hydraulic calculations / hydraulic models, taking into account slopes and low lying levels. The LLFA will consider design drawings to ensure that flow control sizing and storage provision is as per calculations.	Drawings should clearly identify site levels, storage locations and flow controls with cross sections and long sections. The design statement should confirm that drawings deliver calculated volumes.

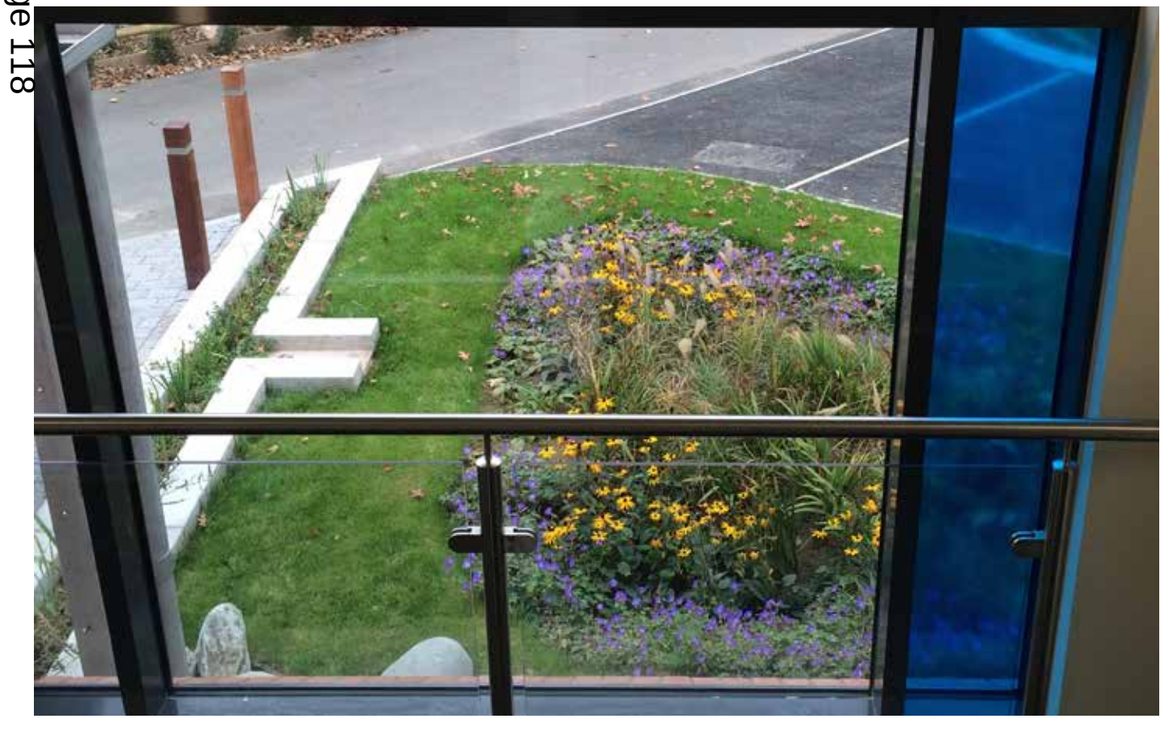
9.6 Controlling flows

Where a single storage volume is presented, it is the intuitive response of most designers to try and accommodate all flow at a single storage location. However, the opportunities for storage across the site are diverse and flexible.

Appearance, functionality and character of a space can be influenced by how flows are stored and controlled within each SuDS component.

Plastic spacers are used to form open joints between standard slabs at Abbey Park Campus Leicester College, where all hard landscape areas, including the pedestrian entrance plaza to the building, are used for storage.

Raingarden and rill exploiting small pockets of green space for creative water management at Bewdley School Science Block.
These features visibly fill whenever it rains.

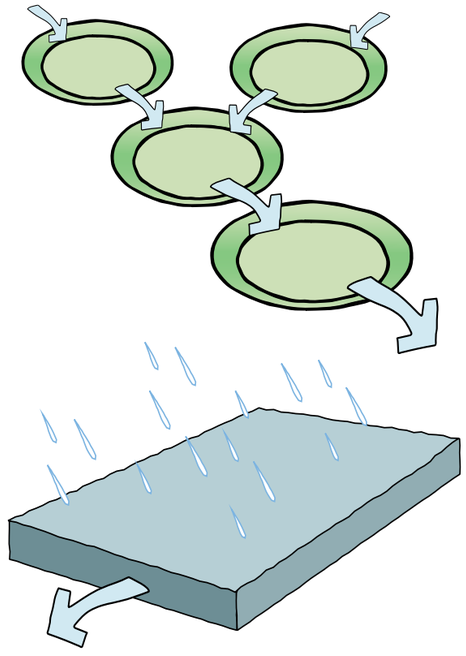


9.6.1 Design flexibility

A framework of three approaches which deliver variable outflow rates (Approach 1) are explored by this guide. These approaches are intended to inspire the designer to think about the possibilities that exist for integrating storage as part of the development rather than defaulting to an underground storage structure prior to discharge from the site. They can be summarised as follows:

Distributed storage components

- distributed storage volumes into discreet storage components such as raingardens, swales, basins and permeable pavement with the potential for different rainfall depths being stored at each location.

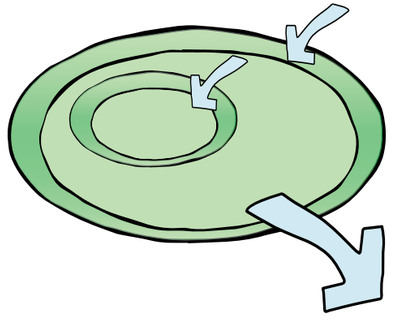


Single, uniform storage components

- store up to the 1 in 100 year rainfall in a single storage component, such as a permeable pavement or blue-green roof, with openings sized to achieve the variable outflow rates.

Single, tiered storage components

- store up to the 1 in 100 year rainfall in a single, tiered storage component, such as a smaller basin used on a regular basis within a more extensive basin for more extreme rainfall events and openings sized to achieve the variable outflow rates.



9.6.2 Distributed storage components

This approach is useful for exploiting small parcels of available space within the development and results in features, such as rain gardens and small basins which can be located close to buildings. These small features are usually sized for between the 1 in 1 year and 1 in 10 year rainfall, with excess rainfall volumes conveyed along the management train to site control.

This approach keeps subsequent storage components from regular wetting as around 95% of rainfall events would be managed by the first component.

This can protect the functionality of downstream components as amenity spaces. The flow control opening for each component can be easily calculated and outflows from one storage component will passively move through subsequent storage components without the requirement for further storage.

Raingardens, such as this wildflower raingarden at St Paters School, Gloucestershire, are an excellent example of the opportunities presented by distributing storage throughout a development.

9.6.3 Single, uniform storage components

Permeable pavements and blue-green roofs which have relatively flat formations can store all rainfall events up to the 1 in 100 year within their footprint. In this scenario the flow control would be designed to ensure that the depth of stored flow discharged at the respective 1 in 1 and 1 in 100 year greenfield runoff rates.

Permeable forming a plaza outside Bewdley School Science Block.

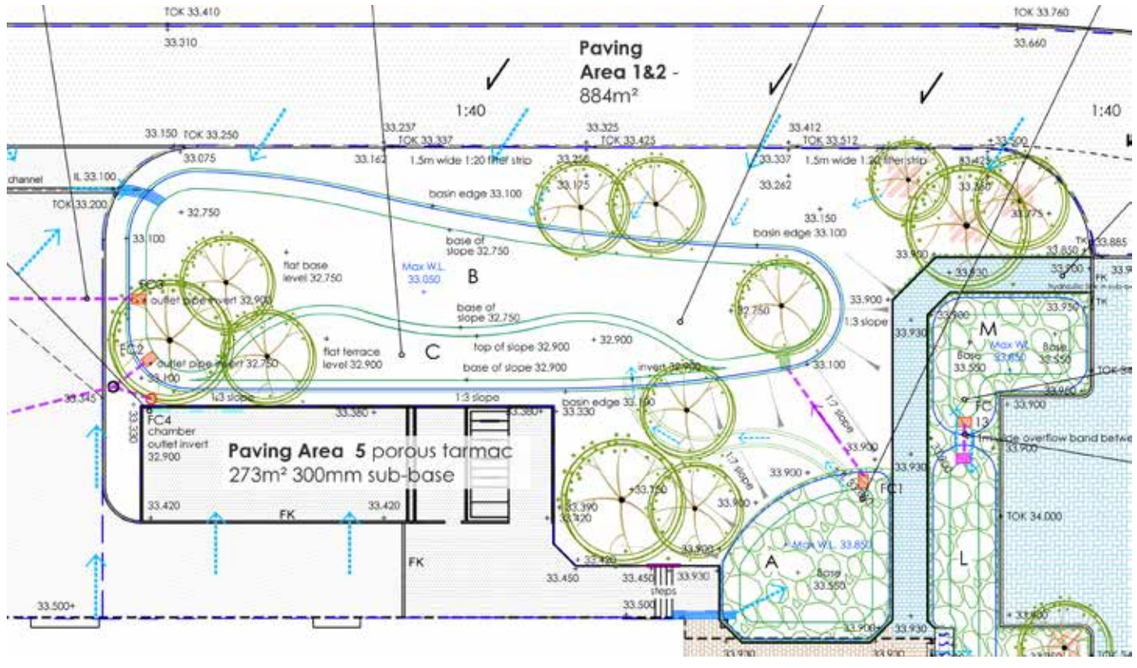
9.6.4 Single, tiered storage components

Source control should be in place where flows are taken to an amenity play basin. In this scenario, a tiered approach to storage is useful in order to maximize the usability of features for general amenity, play or sports. Biodiversity can be introduced in the smaller basin by creating wetland or any other desired habitat.

More frequent rainfall events which produced less runoff such as the 1 in 1 event, are prevented from covering the whole storage component by accommodating them in a smaller basin located within a more expansive basin which can accommodate further volumes of runoff up to the 1 in 100 event. As with other approaches the flow control can be designed to manage the desired variable outflows at various depths of storage.

This wetland basin at Fort Royal School can store day-to-day rainfall whilst the much larger basin in which it sits - defined by the berm on the left of the photo - can store up to the 1 in 100 volume.

Below: Excerpt of a detailed plan showing a tiered basin with two levels (B & C) at a new warehouse in Evesham. This example also demonstrates the principle of distributed storage components with a planted raingarden (A) accommodating up to the 1 in 10 rainfall event.



9.6.5 Flow controls for SuDS

Attenuation storage within sub-catchments and along the management train can require several flow controls. Flow controls come in many forms including orifice plates, slot or V-notch weirs and vortex controls. Any type of flow controls can be prone to blockage unless the opening is protected.

The rate of flow of water through SuDS components is slow as it is restricted to 'greenfield rates' of runoff through each flow control. There should always be an overflow arrangement to deal with blockage or exceedance of the design storm.

Silt is trapped at source in SuDS components and settles out along the management train. Where slow movement of flow is maintained throughout, floating debris that easily blocks outlets is not driven against openings; as is the case with conventional drainage. Simple design features such as sloping headwalls can direct floating debris past the outlet as the storage structure fills.

Orifice flow control chambers such as this one by Controflow are simple, reliable, cost-effective and easy to maintain.

Flow controls in the landscape can make interesting features and help tell the story of how the system works. Although more prone to blockage, features such as this slot weir at Hollington School are very easy to unblock.

9.6.6 The importance of protected openings

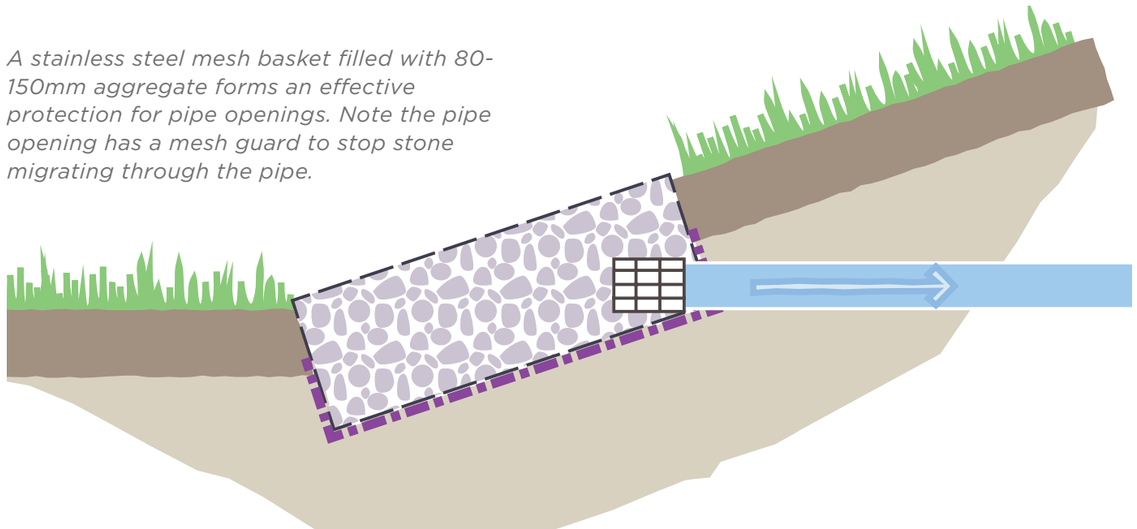
There are no minimum thresholds for attenuated flow rates in SuDS design. Previously the drainage industry has applied a minimum flow rate of 5 l/s but this does not take into account the need in SuDS for low flow rate controls and the design of **protected openings**.

Small sites and sub-catchments of larger sites may need to meet minimal outflow flow rates. Flows can be controlled down to 0.5 – 2 l/s using small openings (15-20mm diameter) with shallow depth of storage.

SuDS components such as permeable pavements, bioretention or filter drains are pre-filtered, and assuming collection through perforated pipes or similar, the flow control opening requires little additional protection.

Open SuDS components such as swales, ponds and basins, require additional protection. One way to provide this protection is to use a stainless steel basket filled with 80-150mm stone with the connecting pipe opening set within the stone to prevent floating debris reaching the flow control.

A stainless steel mesh basket filled with 80-150mm aggregate forms an effective protection for pipe openings. Note the pipe opening has a mesh guard to stop stone migrating through the pipe.



Key points to be considered when designing protected openings:

- Protection to the opening should be of a reasonable surface area to allow for accumulation of litter and vegetation across the surface of the protection.
- Outlets in open structures should be located on a slope to encourage debris to pass over the outlet as water rises in the SuDS component.
- Openings in the protective screen should be smaller than the orifice opening size, thus any residual silt passing through protective screen will pass through the orifice opening.

9.6.8 Sizing flow control openings

The following methodologies for sizing flow controls are intended for use by those with knowledge of hydraulic calculations. Careful consideration should always be given to the selection of equations and coefficients. Section 6.4.3.6 outlines two approaches for the control of flow, summarised as follows:

Approach 1 – Variable control

Non Statutory Technical Standard S2 allows for varying the outflow rate for the 1 in 1 year and 1 in 100 year greenfield runoff rates for the respective rainfall events.

Approach 2 - Qbar method

Where the design requirements for volume control (S3) cannot be achieved then all runoff from the site for the 1 in 100 year event including CCA should be discharged at a maximum Qbar rate (or equivalent) for the development. A lower flow control threshold of 2 l/sec/ha is acceptable to enable reasonable drain down times.

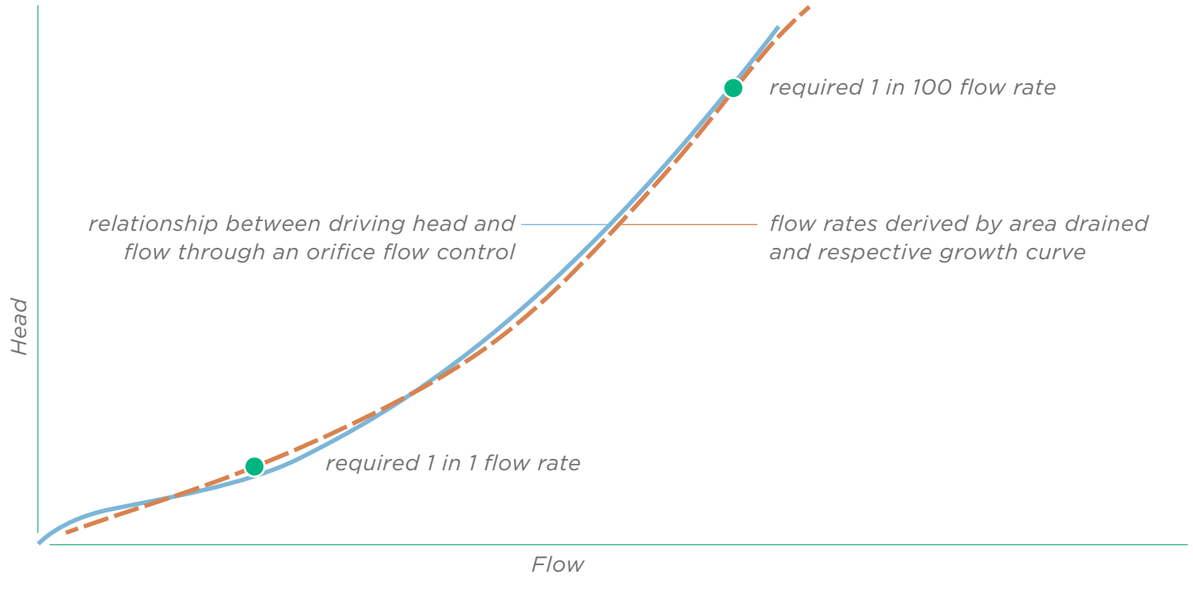
It is noted that the maximum Qbar rate is only reached when the SuDS component is full and the design head reached.

9.6.8.1 Approach 1 methodology

An orifice opening will deliver variable outflow rates as the severity of rainfall increases, producing and storing more runoff. As the depth of stored water increases the gravitational pressure forces more flow through the opening - sometimes referred to as the 'driving head' of water stored.

The following steps outline the process of calculating the opening size of an orifice flow control to meet the requirements of NSTS S2:

1. Establish the controlled outflow (or Greenfield runoff) rates for the 1 in 1 year and 1 in 100 year rainfall event.
2. Define the first, lower orifice invert. A reasonable starting point is to set the invert at the base (or slightly below the base) of storage.
3. Calculate the maximum storage depth for your SuDS component, based on its catchment, for the 1 in 100 year event and the 1 in 100 flow rate - for example this may be 350mm for a permeable pavement or up to 600mm for basins.
4. Make a note of the calculated opening size to achieve the 1 in 100 flow rate at this storage depth.
5. Based on the same storage component design and flow control opening, calculate how a 1 in 1 year rainfall event will behave – make a note of the maximum storage depth and maximum flow rate. Note that the volume and therefore driving head will be significantly smaller for the 1 in 1 year rainfall event and therefore the flow rate through the orifice will be significantly lower.
6. If the calculated maximum flow is less that the 1 in 1 year control rate then the opening does not need changing.
7. If the calculated maximum flow for the 1 in 1 event is larger than the 1 in 1 year control rate then reduce the opening size and recalculate based on the 1 in 1 event being mindful that the 1 in 100 year scenario will have to be reconsidered. Amend the opening size until the 1 in 1 year event is attenuated to the 1 in 1 discharge rate and make a note of the resulting maximum storage depth.
8. Re-run the calculations for the 1 in 100 year event based on the changed opening. The maximum flow rate will now be below the allowable discharge rate resulting in more storage than is necessary. To overcome this, a second opening may be placed above the 1 in 1 storage depth noted in step 7. Add a second opening so that it's lower most point (invert) is at or above the 1 in 1 storage depth and recalculate the storage behavior in a 1 in 100 event. Adjust the opening size and height above the 1 in 100 storage depth until the 1 in 100 flow rate is achieved at the maximum storage depth for the 1 in 100 event.



Graph comparing required flow rates and the variable flow rate through a simple orifice as head increases.

Design Notes:

Both the 1 in 1 and 1 in 100 discharge rates can be achieved by any combination of the following:

- Adjusting the depth of each defined storage tier by adjusting the area and therefore volume of each tier
- Incorporating one or more additional openings

Other options can be explored where there is difficulty in matching outflow rates for both the 1 in 1 year and 1 in 100 year flows:

- Try different types of openings such as rectangular and v-notch weirs.
- Store for a different return period – it is not necessary to store for the 1 in 100 year return period in every sub-catchment. The final discharge from the site must meet requirements of NSTS.

Approach 1 - worked example

For the purpose of the example the following rates are assumed:

- 1 in 1 year 3.5 l/s
- 1 in 100 year 11.1 l/s

Depths of storage are assumed as 150mm and 600mm for 1 in 1 year and 1 in 100 year return periods respectively.

1 in 1 year

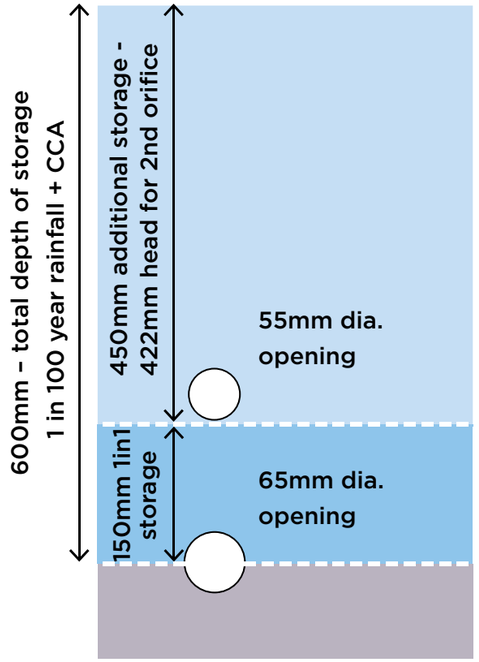
65mm opening with 150mm depth of storage for 1 in 1 year, which provides 3.5 l/s outflow .

1 in 100 year

65mm opening for 600mm depth of storage provides outflow rate of 6.9 l/s. Allowable discharge is 11.1l/s.

Therefore 11.1 – 6.9 = 4.2 l/s. The additional flow will be provided by an additional opening which will only operate once the 1 in 1 year storage is utilised.

Using an additional 55mm opening with invert 150mm above base invert of storage provides 4.2 l/s outflow



9.6.8.2 Approach 2 methodology

A single opening can also be sized to discharge at Qbar for the 1 in 100 year + CCA rainfall event. This does not meet the requirements of NSTS S2 but can be considered to demonstrate S6 as more flow is held back on site for longer.

The Qbar (or Qmed) flow rate will occur whenever the storage volume is full and the design head is reached. This methodology is simpler to apply than Approach 1 as there is only one target flow to be sized for, however, it may also result in increased storage volumes.

The following steps outline the process of calculating the opening size of an orifice to discharge at Qbar rate.

1. Establish the Qbar rate for the flow control location. The Qbar rate should be proportional to the contributing catchment.
2. Define the maximum storage depth. For example 600mm could be adopted for the 1 in 100 year + CCA rainfall event. Define the maximum storage depth.
3. Define the orifice invert. A reasonable starting point is to set the invert at the base (or slightly below the base) of storage.
4. Using the appropriate orifice equation establish the opening size which will convey the required QBar flow rate at the defined 1 in 100 year head (depth of water above the orifice).

9.7 Water quality

Rainfall picks up pollution from development surfaces. As runoff moves slowly through SuDS components most pollution is removed through sedimentation, filtration and bioremediation. Naturally occurring processes in many SuDS components break down organic pollution, meaning that there is no build up or need for removal of this pollution over time.

The NPPF sets an obligation on proposed development to have no negative impact on the environment and encourages provisioning opportunities for biodiversity and habitat creation, not just in the wider landscape, but within development.

Using **source control** and the **management train**, SuDS delivers the requirements of NPPF by providing a **controlled flow of clean water** through the development.

Open water features should not receive flows directly from development without sufficient treatment.

- Hydrocarbons remain in pond sediments for extended periods.
- Silts which carry heavy metals impact on the aquatic environment and add to maintenance problems due to the build-up of toxic sediments.

The amenity and biodiversity value of ponds and wetlands should be protected with pollutants removed at source and along the management train.

NPPF Paragraphs 109, 117 and 118

9.7.1 The objectives of designing for water quality

- Treat runoff to prevent negative impacts to the development's landscape and biodiversity as well as receiving watercourses and water bodies within the wider landscape.
- Design for interception losses to occur for most small rainfall events so that the most polluted part of runoff is more effectively held and treated on site.
- Manage surface water runoff at or close to source and at or near the surface where possible to begin treatment quickly and maximise treatment through the system.

Where water quantity design adopts a SuDS management train approach, as outlined in this document, water quality objectives are normally achieved by default, due to the number of components already limited in series.

9.7.2 What water quality design should demonstrate

For effective treatment of runoff SuDS should be designed to:

- reduce the frequency of runoff by incorporating interception losses
- maximise travel time along the management train
- trap a range of contaminates
- minimise impacts from accidental spillage.

Effective treatment is provided through provision of **source controls** and a **management train**.

9.7.3 Hazard and mitigation risk assessment

Prior to 2015, SuDS water quality design adopted the 'treatment train' approach. This inferred that treatment was provided by allowing run-off to pass through a series of suitable SuDS components prior to discharge. This method remains robust if applied correctly, but has been refined by the 2015 CIRIA SuDS Manual which adopts a '**Source-Pathway-Receptor**' approach, with the extent of analysis required associated with the level of risk.

The varying levels of assessment are identified as follows:

- On low to medium risk sites where discharge is to surface water – apply 'Hazard and Mitigation' Indices approach to identify the number of SuDS components required (CIRIA SuDS Manual Section 26.7.1).
- For medium risk sites where discharge is via infiltration, undertake risk screening to establish whether infiltration will be permitted and apply the Indices approach to identify the number of SuDS components required prior to infiltration (CIRIA SuDS Manual Section 26.7.2).
- For High Risk sites, there is likely to be a requirement for a discharge licence. The Environment Agency will outline level of assessment required and discharge water quality parameter compliance limits.

Design Note:

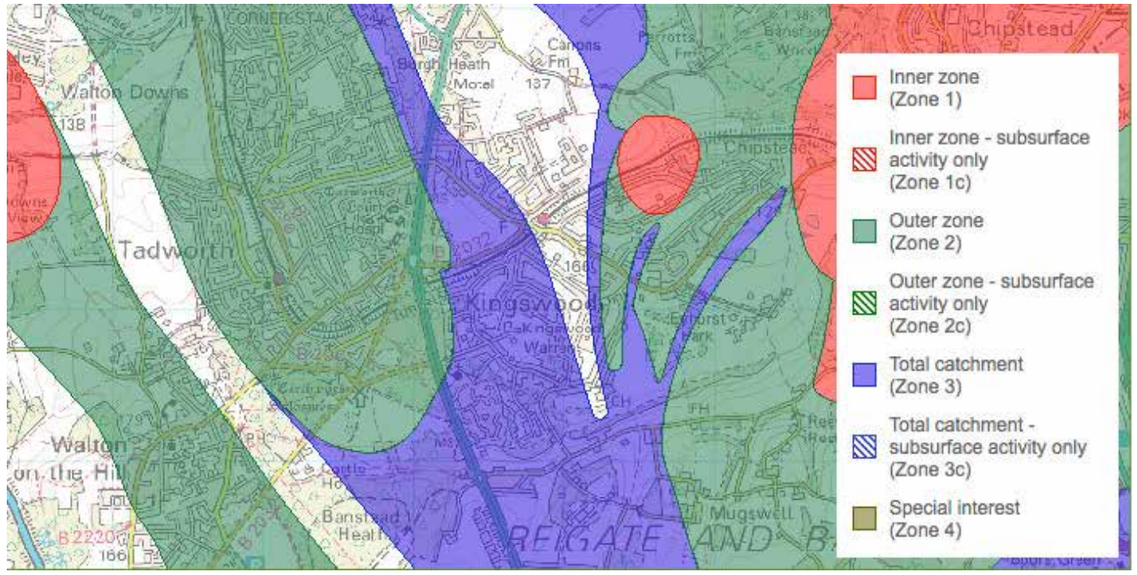
Table 26.15 of the 2015 SuDS Manual denotes that conventional gully and pipe drainage provide **zero treatment**.

For low to medium risk sites, the indices approach for discharge to surface waters is reasonably simplistic to apply.

A level of understanding of the site's soil and underlying geology is required to undertake the infiltration risk screening assessment. The screening assessment will determine whether it will be permissible to infiltrate and the indices approach is applied to define the level of treatment required prior to the point of infiltration.

Discussion will be required with EA where the site overlies Source Protection Zones 1 or 2 or where contamination is identified on brownfield sites.

SPZ areas identified on the EA website: http://apps.environment-agency.gov.uk/wiyby/37833.aspx



Design Notes:

On freely draining sites where insufficient treatment is provided at the first stage of treatment source control, initial SuDS components may require lining to prevent direct infiltration carrying pollutants into underlying geology.

On low to medium risk sites permeable pavement will provide sufficient treatment prior to infiltration into the ground via the pavement subbase.

9.7.4 Dealing with spillage

SuDS components are very effective at dealing with 'day to day' pollution. When a spillage occurs this can overload the treatment processes which occur within SuDS components. Where the spillage is an organic based pollutant a spill kit is used to take up the excess and the residual pollutants left in situ to breakdown naturally.

Designing for spillage should demonstrate:

- spillage is contained at or near the surface so that it is visible and accessible.
- slow travel time through a SuDS management train allows time for reaction and initial clean up to take place
- mechanical mechanisms such as shut off valves should be avoided due to the inherent risk of the essential keys not be locatable at the time of spillage. An awareness of outlet locations which are visible and can be easily sealed off will provide simple and robust containment.

Milk spillages will bypass conventional drainage methods of spill containment
https://naturalresources.wales/about-us/news-and-events/news/nrw-respond-to-milk-spillage-in-llantrisant/?lang=en.

9.7.5 Water quality design checklist

Item	What is being checked	Information presented for assessment
Method of discharge	Sensitivity of receptor and level of treatment required	Design statement to specify method of discharge and sensitivity of receptor.
Treatment	Sufficient treatment in place protecting site biodiversity and amenity assets and the wider environment. Evidence of source control, subcatchments and management train.	Layout drawing clearly indicating SuDS components and management train. Details of Indices approach and infiltration screening assessment (as appropriate).
Infiltration	Presence of SPZ's, contaminated land, depth to seasonal high groundwater table.	Coordinated constraints plan. Evidence of discussion with EA where appropriate
Construction phase	Demonstration of how site runoff could be managed during construction to minimise the risk of pollution to the wider environment due to silty construction runoff.	Section of the drainage design statement outlining a potential approach for construction runoff management. Contractors will be responsible for uptake.
Operation and maintenance plan	Operation and maintenance should be simple to understand and easy to implement. Where available, SuDS design should deploy natural treatment process to breakdown organic pollutants passively. Contingency measures in the event of a minor / major spillage	Concise operation and maintenance plan. Description of tasks and detailing of where personnel are required to visit site to remove hydrocarbon based pollutants (i.e. organic pollutants have not been fully broken down passively as part of SuDS treatment process). Plan indicating potential for containment and positioning of spill kits (as appropriate)

9.8 Amenity

Confirming integrated SuDS design

Amenity is one of the four pillars of SuDS design and perhaps open to the most interpretation and judgement.

Amenity focuses on the usefulness and aesthetic elements of SuDS design associated with features 'at or near the surface', and considers both multi-functionality and visual quality.

The amenity value of SuDS will have been considered at both Concept and Outline design stages but some finer aspects of value will be enhanced by detail design at stage.

An evaluation of the successful integration of amenity uses the design criteria set out in Concept Design.

Informal play, through integrated design.

9.8.1 Legibility

Understanding how the SuDS design functions is important both to everyday users of the SuDS environment and those who look after it.

An exercise in following each management train from source to outfall and imagining how the scheme presents itself to the visitor should highlight any problems with legibility. Considerations will include:

- How is rainfall collected?
- What 'source control' techniques have been used and how they can be accessed and maintained?
- How does runoff travel from where it has been collected onwards through 'source control' components to each part of the site. This is conveyance?
- Where is runoff stored and cleaned along the management train in 'site controls' recognising that these functions may occur within permeable construction?
- Where are flow controls are located?
- Are overflow and exceedance routes clear and understandable?
- Is the outfall obvious, accessible and understandable?

9.8.2 Accessibility

All parts of the SuDS landscape should be accessible to both everyday users and site managers.

Full accessibility requires safety by design for every element of design including:

- open water
- changes of level
- design detailing eg. headwalls, inlets and outlets
- clear visibility of the system
- physical accessibility to all with an understanding of the limitations of level changes and open water.

Hopwood Park MSA M42. Wooden terrace and balastrade with wet bench and planted aquatic bench protection to open water.

9.8.3 Multifunctionality

Many parts of the SuDS landscape can be useful in ways not associated with managing rainfall.

Permeable pavement is an example of full multi-functionality in that the surface is always available for managing rainfall and also allows vehicle access, parking and pedestrian use.

Reasonably level green space can be used for sports and other social activity most of the time but not when inundated. Everyday rainfall (1-2 year return period events) can be designed to be managed elsewhere in the landscape.

Other functionality can include:

- play opportunity throughout the SuDS landscape
- informal leisure like jogging, picnics, dog-walking etc
- community activities such as gardening etc
- wildlife habitat
- education.

Usability of swales and basins can be enhanced by under-draining into filter trenches below the ground to keep grass surfaces dry most of the time. For instance, within housing where grass surfaces are valuable for play.

9.8.4 Visual quality

The overall character of the SuDS landscape and surrounding areas will have been considered during Concept and Outline Design stages.

Design detailing of SuDS components, particularly inlets, outlets, control structures, channels and basins with their edges and profiles remain to be confirmed during Detail Design Stage.

9.8.5 The integration of amenity and SuDS

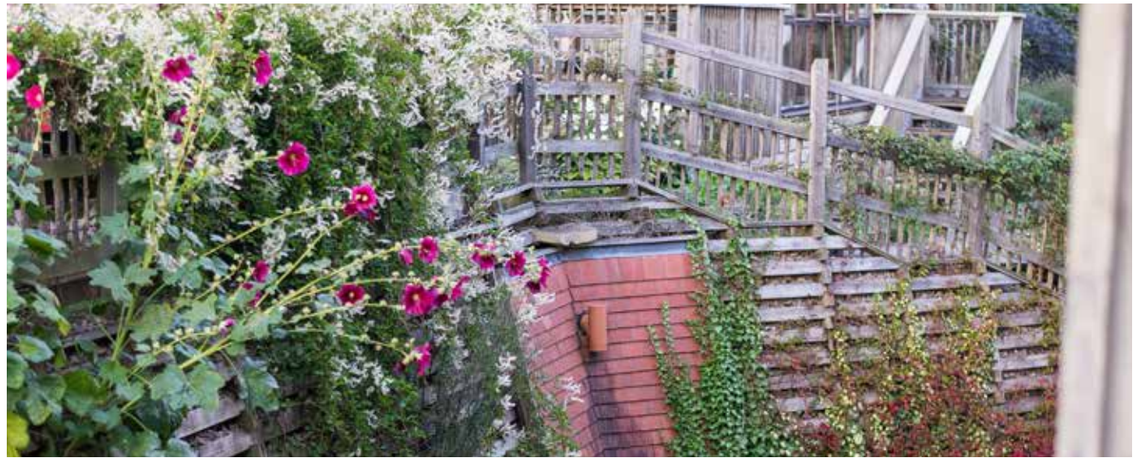
Early SuDS design in Britain tended to create dedicated SuDS corridors with a series of basins, swales and wetlands that were separate from the development they served. In many cases wetland features would be fenced. They were therefore thought to be land hungry, expensive and required additional site maintenance.

In order to maximize the value of SuDS it is important to understand the principle of integrated SuDS design. SuDS design should integrate the requirements of rainfall management with the use of development by people.

Fort Royal Primary School, Worcester. Mini-courtyard with rainchain, rain slide, raised pool and rill.

Firstly the collection and conveyance of runoff can add visual interest to development, spouts, rills surface channels, for instance, should be considered as part of the landscape character of a development.

Springhill Cohousing, Stroud. Tile hung cascade conveys water through terracotta T-piece to lower level.



Secondly it is important to clean runoff as soon as possible so that water that flows through development is as clean as possible for both Amenity and Biodiversity benefits. This requires 'source control' at the beginning of the SuDS to remove silt and gross pollution.

Source control components such as permeable surfaces, filter strips, green/blue roofs, bioretention and in some cases swales and basins can all provide early cleaning and flow reduction at the beginning of the management train.

Community use and wildlife interest are both compatible with SuDS design. SuDS should integrate with both designated public open space, where both everyday rainfall and occasional heavy storms can be managed, and public pedestrian routes where conveyance of water and biodiversity can be combined.

The integration of SuDS with Amenity, Biodiversity and site layout provides additional benefits including:

- efficient use of space through multi-functionality
- usability through integrated use of landscape space
- visual and biodiversity interest as part of integrated site design.

Springhill, Stroud - Raised pool and social space.

9.9 Biodiversity

9.9.1 Principles of design for biodiversity

Geology and climate are fundamental influences on the natural character of the landscape and determine the basic habitat types likely to evolve over time.

Local topography, aspect, soils, landscape design and habitat management all affect biodiversity in a developed landscape and can be influenced by SuDS design.

Biodiversity must be considered at the larger catchment scale to create a sympathetic green / blue infrastructure and also at a local scale to provide habitat and connectivity linkages within and around development.

A biodiversity micro-pool set within a meadow raingarden at St Peters School Gloucester,

9.9.2 Biodiversity at development scale

There is usually a **host landscape** that provides an enclosing envelope to the SuDS 'management train'. This term describes the landscape not directly affected by SuDS features and the impact of rainfall management.

This surrounding 'host landscape' may include natural habitat or reflect more ornamental planting, particularly where it is close to buildings.

The wider host landscape should reflect the ecological character of surrounding natural habitat wherever this is possible but careful design can still enhance wildlife value in ornamental planting by following specific guidance.

Where SuDS installations are more isolated, for instance in urban retrofit and re-development, then SuDS spaces can act as biodiverse islands, sometimes likened to 'service stations', that act as staging posts and feeding sites for mobile species like birds, insects and other wildlife in an otherwise hostile environment.

9.9.3 Key design criteria for biodiversity in the developed landscape

9.9.3.1 Clean water

Clean water is critical as soon as possible for all open water features in the landscape. Clean water is delivered using initial pollution prevention measures to prevent contaminants reaching water, source control features and further site controls along the management train.

9.9.3.2 Structural diversity

Structural diversity both horizontally and vertically within water features, the landscape and in vegetation generally provides habitat variety for wildlife. Structural diversity is inherent in many SuDS features particularly swales, basins, wetlands and ponds that can easily be enhanced for habitat creation.

Ornamental planting should mimic natural vegetation by developing a complex vertical structure of trees, shrubs and herbaceous cover.

9.9.3.3 Connectivity

Connectivity between wetland habitat areas both within and outside the site encourages colonisation into and throughout the development landscape. These connections are particularly important both for animals on the ground but animals like bats use individual trees and woodland edges to travel from one place to the next and use SuDS wetlands to feed.

Connectivity is inherent in the management train principle but must be considered carefully where one feature links to the next. Surface conveyance and overflow routes, with a minimum use of pipework and inspection chambers, is helpful in retaining wildlife links.

There should be a direct connection between the SuDS landscape and the blue/green infrastructure that receives the 'controlled flow of clean water' from the development.

9.9.3.4 Prevent pollution to habitat

Permanent vegetation should cover all soil surfaces to prevent silt runoff and planting should be designed to avoid the use of fertilizer, pesticides and herbicides.

9.9.3.5 Maintenance for wildlife

Sympathetic maintenance enhances biodiversity but should be compatible with the aspirations of the local community to ensure acceptance of a more natural landscape character.

9.10 Planting design for SuDS

The choice of vegetation cover and plant species is an important aspect of designing SuDS systems and features. Vegetation is an inherent functional part of any soft-landscape SuDS feature as well as being about aesthetics, usability and wildlife benefits. Vegetation type and species selection can significantly affect hydraulic and pollution control functionality as well as the contribution to amenity and biodiversity.

The SuDS plant palette will often vary from conventional landscape design for reasons of SuDS functionality, different ground conditions and to protect the wider environment from chemical contamination.

Strutts Centre, Belper.
Contemporary 'prarie' planting in raingarden collecting roof runoff and access road runoff.

9.10.1 Objectives of planting design for SuDS

SuDS planting design should satisfy general planting design criteria and relies on an awareness of the landscape maintenance requirements. In addition, planting should fulfill specific SuDS functions, such as:

- preventing soil erosion
- trapping silt and pollution from runoff
- encouraging interception (evaporation, infiltration and transpiration)
- enabling long term infiltration by opening soil profiles through the root growth cycle
- augmenting biodiversity by structure, species richness and careful management (refer to the Biodiversity section 9.9)
- creating attractive surroundings and community amenity
- protection of the environment by avoiding the need for herbicides, pesticides or fertilizer treatment.

9.10.2 The Principles of SuDS planting selection & design

SuDS vegetation choice and design should achieve the following:

- General planting design should connect with the SuDS landscape, ideally with grassland, woodland or ornamental planting creating linkages for visual benefit and biodiversity. The design criteria set out in the Biodiversity section (9.9) should be followed where appropriate.
- Vegetation should permanently cover the ground, both in summer and winter, to prevent erosion of the soil surface.
- The matrix of roots, stems and leaves of vegetation slows the flow of runoff, filtering water and encouraging silt to settle out in components like filter strips, swales and basins.
- A vigorous growth of vegetation, particularly when forming an extensive root mat, encourages natural losses into the ground throughout rainfall events.
- Planting design should avoid fertilizer, pesticides or herbicides wherever possible to avoid leaching of chemicals into the SuDS and groundwater. They should use careful plant selection and a soil conditioner such as 'green waste compost' as an alternative to suppress weed growth and improve soil fertility.

SuDS planting is often naturalistic in character, particularly where SuDS are being applied to a greenfield site. Naturalistic planting is usually the most appropriate, providing maximum biodiversity benefits as well as being cost effective, resilient and most likely to have modest long term maintenance requirements.

In built up areas a more formal and ornamental design style may be required for raingardens, bio-retention features and green / blue roof surfaces. Recent research by the Royal Horticultural Society (RHS) has demonstrated that ornamental plants, close to the wild type, especially from the northern hemisphere can provide similar benefits to wildlife as native planting but the capital cost and management can be more difficult and expensive.

Contract arrangements should always allow for additional or remedial works to ensure the integrity of vegetation surfaces that perform a SuDS function.

Strutts Centre, Belper.
Brick channels collect roofwater for linear raingarden with garden style planting.

9.10.3 SuDS vegetation types

There are a number of vegetation types commonly used in SuDS:

- grass surfaces – a common SuDS ground cover
- herbaceous planting - typically used in raingardens and bioretention
- wetland and pond planting – usually based on native wetland habitats
- trees and shrub planting – used to enhance the landscape and aid interception losses
- green / blue roofs – resilient low planting for shallow growing media on roofs.

These are covered in the following sections.

Rectory Gardens Rainpark, Hornsey. Forebays, swales and underdrained basins use SuDS turf (100-150mm) to filter runoff, with amenity grass for public use.

9.10.3.1 Grass surfaces

Grass is the most cost effective, flexible and familiar surface for vegetated SuDS features like filter strips, swales, basins and the edges of wetlands and ponds. Grass surfaces will often merge seamlessly with the surrounding host landscape.

Grass surfaces are reasonably easy to establish, simple to maintain, meet the most important requirements in managing runoff and can provide biodiversity and amenity benefits.

Grass swards must be vigorous and able to repair themselves if damaged. For this, an appropriate topsoil depth is necessary.

There are 3 general types of grass surfaces used in SuDS landscapes:

- Amenity Grass - for everyday community use and to give a cared for appearance
- SuDS Grass – a longer amenity grass used where water may flow or be contained in temporary storage
- Meadow Grassland - containing a mixture of grasses and flowering plants left long with an annual cut towards the end of the year.

Amenity grass

An everyday grass surface that can be used in SuDS features allowing regular public use.

The great advantage of amenity grass is its availability as purpose grown turf and most of the time it will establish quickly if properly laid on ground that is not too wet. It will grow on the dry shoulders of swales and basins as well as bases of SuDS features that are designed to be dry most of the time. It is useful for providing a 1m wide cosmetic neat edge to longer grass and as amenity green space for the community.

- Amenity turf should be grown on a sandy loam to aid surface drainage.
- Seeding is a cheaper and more flexible option but can fail easily in adverse conditions. Coir or jute matting is a practical way to provide temporary erosion protection.
- A mown edge of amenity grass is often important where SuDS grass and longer meadow grass is used to make it clear that the longer grass is deliberate and to give a maintained appearance.
- Amenity grass is usually mown at 35-50mm as this is the short-mown grass preferred by many Councils and is familiar to the public. This short grass is susceptible to drought and does not provide the flow reduction and filtering required in SuDS.

Parkside, Bromsgrove. Amenity grass shallow detention basin feature, integrated into site design, manages occasional extreme rainfall.

Design Note:

Avoid turf products with plastic mesh (unless they are bio-degradable) as these introduce microplastics to the environment. Photo-degradable is not the same as bio-degradable as the plastic breaks down into microplastics.

SuDS grass

SuDS grass describes the longer amenity grass used wherever water is likely to move or flow, even minimally.

It is ideal for the immediate protection of any flow areas.

Eventually this turf can be colonized by wildflowers adapted to regular cutting but in the first instance an amenity grass mix is often used as seeding or turf to cover the surface of SuDS components before water flows across the surface. Suppliers tend to offer standard species mixes although specific mixes can be purpose grown where there is a lead in time of 10 or more weeks in the growing season.

- The grass is long enough to act as a filter but short enough to prevent 'lodging' (lying flat under flow conditions) and so must be maintained between 75mm and 150mm in height.
- Turf can be laid in spring and autumn or when weather conditions are suitable, for instance in mild spells in winter or wet weather in summer. Pegging the turf may be necessary, with fully biodegradable pegs, to prevent water flow lifting the turves.
- In dry weather a coir or jute mesh covering a seeded surface can be used to establish grass but there may be bare patches to repair in the autumn.

Longer SuDS grass as a filter strip between paved surfaces and a raingarden.

Facing: A seeded meadow in a 'playful raingarden' at Renfrew Close Community Raingardens, Newham.

Design Note:

This is best specified as turf as it is functional as soon as it is laid.

Meadow vegetation

Meadow vegetation has greater resilience to dry conditions with less likelihood of lodging and offers amenity and biodiversity benefits including habitat connectivity and visual interest.

The grass and herb species develop a much greater root and leaf mass that assist both infiltration and evaporation losses. It provides very effective filtering and slowing of the flow of water as it passes through the grass profile.

- The meadow mixture that is most useful where regular or occasional inundation is expected is based on the MG5 grassland community (NVC classification). This mixture is tolerant of both wet conditions in winter and summer drought but as with all meadow grass habitat can require time and care to establish. Other mixtures are available where a drier or wetter grassland might be expected.
- The addition of an annual cornflower mix can give a floral impact in year one.
- Meadow vegetation should comprise native UK provenance seed.
- Usually a single cut, rake off and removal of cuttings towards the end of September or early October is sufficient to keep the sward visually acceptable. Further cuts can be carried out at other times of the year for specific visual or species management.
- Autumn is the best time to seed as some meadow plants need cold weather to break dormancy (cold stratification).

9.10.3.2 Herbaceous planting

Raingardens and bioretention features, in particular, use herbaceous plants and sometimes low shrubs to create an ornamental appearance or planting that is appropriate to a formal landscape context.

Flowing water can be a constraint to the planting of SuDS features. Raingardens and bioretention are examples of smaller basin structures with less dramatic flows that allow an ornamental planting approach to be taken. This is helped if there are inlet aprons or other erosion controls where water enters the feature.

Plants can be evergreen (e.g. Geranium macrorhizum and Phlomis russeliana) or plants that shrink back to a visible clump (e.g. Alchemilla mollis and Rudbeckia fulgida 'deamii') or with winter-present foliage such as grasses like Miscanthus and Stipa. This planting usually needs a minimum of one strim in February and some weeding during the growing season.

Herbaceous planting, as well as fulfilling the functional and aesthetic criteria of more general soft landscape design, must protect the SuDS network, by means of the following criteria:

- The planting must resist flow, encourage the trapping of silt and pollution as well as collectively be attractive all year.
- Unlike general amenity planting, the planting must be either evergreen or have a presence at ground level year-round.
- Plant selection must take into account that the raingarden will be dry most of the time and although it will be inundated in most rainfall events will usually return to empty within around 24 hours.
- Herbaceous plants should be selected with a fibrous root system to hold the soil together.
- Planting choice should avoid the reliance on herbicides, pesticides and fertilisers to protect receiving watercourses.

Bioretention features are defined by aggregate filtration below specialist highly permeable soils. This can be a testing environment for planting and so further requirements exist:

- Bioretention planting, located in public open space, must be resistant to damage and neglect. Certain evergreen suckering shrubs and ornamental grasses can resist occasional damage and require simple maintenance.
- If tree planting, consider fine leaved species that do not generate heavy leaf fall.
- Select drought tolerant species.
- A regular mulch of coarse organic matter is also important to keep the soil healthy and the surface of the soil open.

Facing: Herbaceous and grass planting used to dramatic effect at Australia Road SuDS Park.

Attractive and wildlife friendly herbaceous planting by Sheffield City Council in a crushed stone bioretention substrate.

Recent ideas about planting, including 'prairie planting style', have influenced both the choice of plants and the growing mediums used in recent SuDS features.

These new approaches combine a new palette of herbaceous plants and grasses with the free draining soils recommended for bioretention structures and are being trialled on green roofs and modified bio retention features.

Plants chosen to withstand dry conditions of free-draining soil profiles may be from many sources.

In these cases, a deep stone drainage layer overlain by an open graded growing medium based on crushed stone with 15 - 20% organic matter and about 10% of loam added to the mix may be used. This soil layer is then topped by crushed stone.

Road runoff is largely managed by the very large surface area of very free draining soil rather than a dense planting mix.

9.10.3.3 Wetland & pond planting

The biology of ponds and wetlands is similar, but not identical. One definition suggests that ponds have around 75% open water and wetlands around 25%.

The planting requirements are very similar.

Wetland habitats are very sensitive to invasive plants and therefore unless the SuDS are part of an enclosed urban situation native wetland plants should be used in planting proposals and should be obtained from an accredited source with confirmation that the aquatic nursery is free from alien and invasive species.

Wetland plants can be divided into 3 categories:

- emergent plants that tend to grow vertically around the edge and into the water depending on its depth
- spreading plants that tend to grow horizontally around the edge and into the water depending on the depth
- water plants that grow in the water column either anchored by roots or free floating.

These plants are usually planted at 5 or 8 plants per square metre or as a linear edge to wetlands. Wetland plants grow vigorously in spring and through the summer with growth slowing as autumn approaches.

Autumn and winter planting of wetland plants often fails to establish well and they tend to be uprooted by water or wind. Plant in spring or early summer wherever possible.

Where wetland plants are being used where people are often present e.g. housing, visually attractive native plants can be selected to enhance acceptability by the community. Flag iris (Iris pseudacorus) and Purple Loosestrife (Lythrum salicaria) are examples of plants that add attractiveness to waterside planting.

Wetland and pond planting design criteria:

- Selection of aquatic plants should normally be native, and a mix of emergent and spreading plants.
- In urban design some ornamental planting may be justified but not where there is a risk of direct links to the natural environment.

Design Note:

Reedmace (also called Bulrush or Typha latifolia) can seed rapidly on exposed mud edges. This colonizing plant should be considered a potentially dominating weed until a diverse plant community is established.

9.10.3.4 A place for trees and shrubs in the SuDS landscape

Trees provide a number of functions specific to the SuDS landscape, as well as providing a great number of other natural benefits.

Design criteria:

- Ensure sufficient space for crown spread and root growth.
- Allow healthy SuDS vegetation below by using a tree with a light foliage and avoid weeping or suckering varieties.
- Give preference to a small or pinnate leaf type that will degrade easily, to avoid smothering the vegetation below and to reduce the risk of blockage to inlets or outlets.

9.10.3.5 Green & blue roof planting

Green roofs are now a familiar technique for managing rainfall. The blue roof is a development of the green roof whereby it is used for collecting and storing rainfall 'at source', on the roof.

Drainage layers can exacerbate drought conditions, particularly on a pitched roof.

Shallow soils of 50-80mm depth are also prone to plant failure due to drought conditions. A greater depth of soil permits a stronger plant community and greater absorption of rainfall. Soil depth should ideally be nominally 100mm or deeper to maintain healthy plant growth.

Ruskin Mill Horsely, Glos.
Greenroof with gravel edge and rainchain.

Design criteria:

- Plant choice should be appropriate for the proposed depth of growing medium.
- Plant choice should be appropriate for the proposed use and desired character.
- Plant choice should be drought resistant.
- Plug planting is normally at 20-30 plants per square metre.

Design Notes:

A biodiverse native wildflower mix can be combined with plug planting at between 8-16/m^2.

A greater depth of soil permits a stronger plant community and greater absorption of rainfall.

Detailed Design

9.11 SuDS Components

Competent design and detailing of SuDS components ensures that runoff is collected, conveyed, cleaned, stored, controlled and discharged from site in an effective manner.

The general principles of SuDS component design are considered in the SuDS Manual 2015 Sections 11-23. The purpose of this section is to outline some of the key considerations, experiences and practical detail solutions of commonly used SuDS components garnered over many years by the authors.

The following classifications are not rigid, for example a permeable pavement can be considered as both source control and site control where it provides the required site storage:

Strutts Centre, Belper.
A retrofit downpipe shoe and brick channel into a raingarden.

Source Controls providing storage

Providing storage throughout the site (distributed storage components), means that every opportunity for storage across the site is exploited, greatly reducing the overall volume and size of site controls.

Source controls remove most silt, heavy metals and heavy oils from runoff, allowing basins, wetland and ponds to be designed as site assets.

- green/ blue roofs
- raingardens
- bioretention
- permeable pavements

Collection and connection

Where runoff is collected from roofs, conveyance to the SuDS component may be required. Historic urban design shows us a number of surface collection methods including spouts, surface channels and rills.

How runoff is collected and conveyed under crossing points such as footpaths and roads is a primary consideration of any SuDS design. Design details such as road gullies can artificially increase the depth and cost of SuDS.

- channels & rills
- filter strips
- pipe connections

Source Controls providing collection & conveyance

Water must either be kept at or near the surface to allow runoff to flow into SuDS structures, or it must be collected through permeable surfaces.

The simplest method of collection of runoff from an impermeable surface is to intercept it as sheet flow from a hard surface. Where runoff flows directly from hard surfaces to filter strips or swales then runoff must leave the hard surface effectively without the risk of ponding.

- swales
- filter drains

Site Controls

Where runoff is collected at the surface, a depression in the ground, mimicing hollows in the natural landscape, is the easiest and most cost effective way to manage large volumes of water in the landscape.

Where landscape is limited, storage opportunities within pavements and on roofs should be explored.

Careful design can maximize opportunities with different design volumes in different places providing maximum opportunities for multi-functional use and biodiversity.

- basins
- wetlands
- ponds
- storage structures

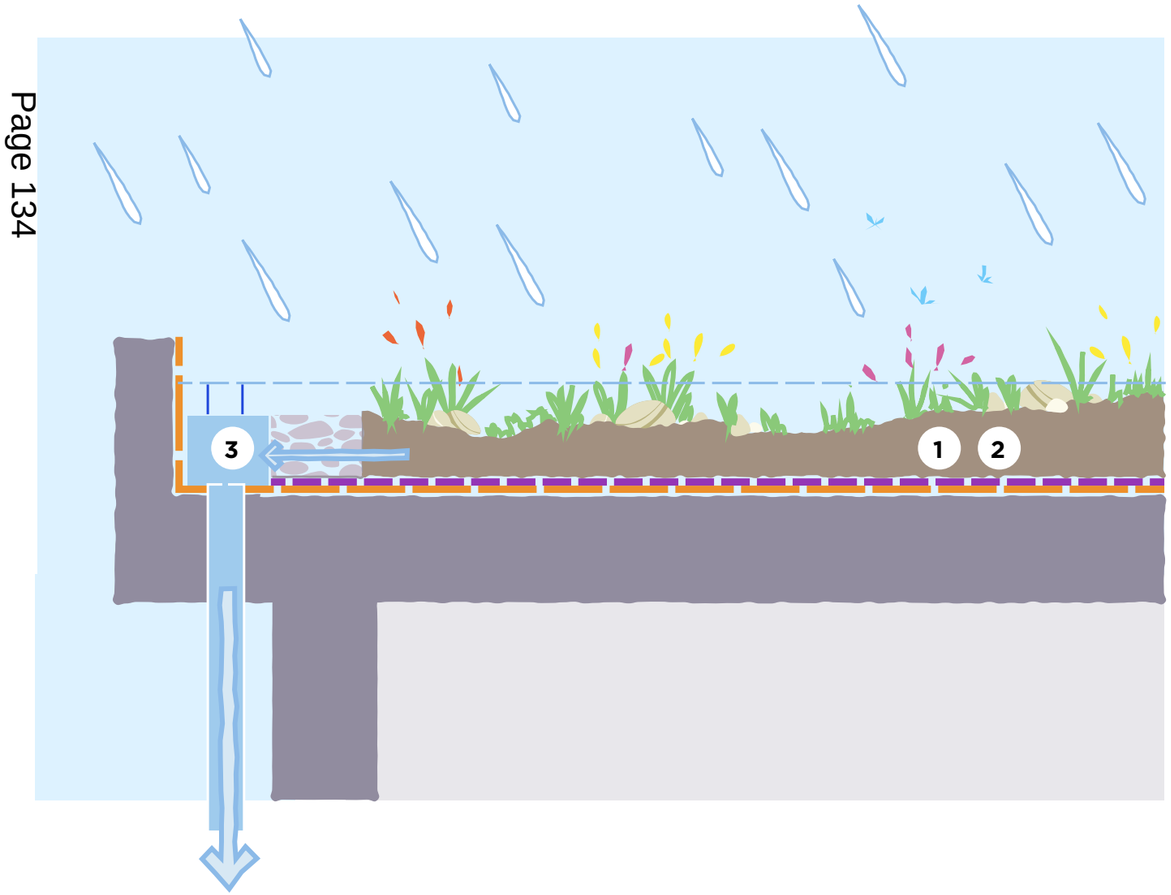
Pershore High School, Worcestershire.
Low risk access road with 1.2m wide filter strip source control and conveyance swale.

Pershore High School, Worcestershire.
Swale conveyance into pond site control for final treatment and storage.

Green & blue roofs

Recent examples in the UK have focused on a shallow depth of growing medium with a Sedum (fleshy leaved, drought tolerant plant) based vegetation. This approach is driven by cost and the idea of minimum maintenance. There are now many examples of failure of planting on this type of green roof due to lack of drought resillience.

1. A minimum 100mm soil depth is recommended for drought resilience and this design is particularly suitable for a natural dry grassland vegetation.
2. Most green and blue roof substrates have a water storage capacity of between 30-40% void ratio.
3. A simple orifice control together with overflow arrangements provides an ideal opportunity to retain water on the roof meaning that it does not have to be stored again at or below ground level.This arrangement is particularly important for urban redevelopment where the building footprint may take up all of the site. This would be referred to as a blue roof.



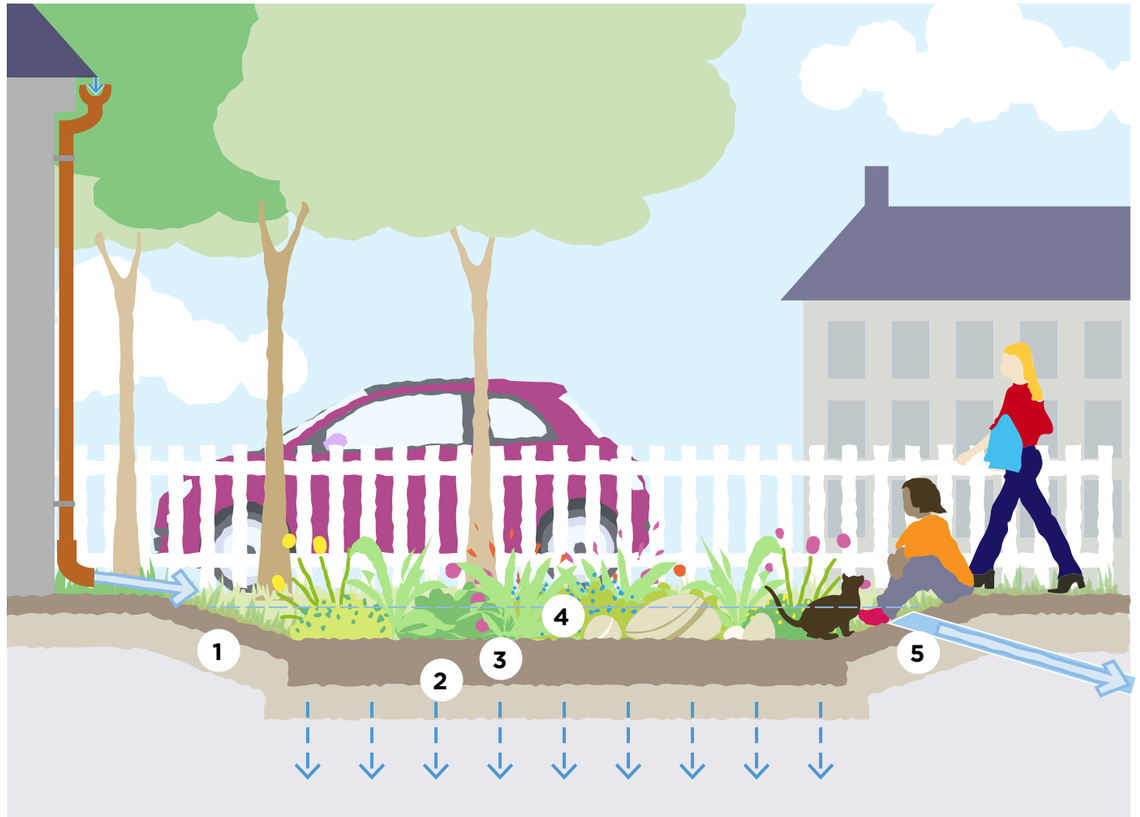
Raingardens

The raingarden concept was pioneered in Prince George's County, Maryland, USA in 1990 when small stormwater basins were proposed for individual houses to replace larger regional stormwater ponds.

Raingardens are designed to collect and manage reasonably clean water from roofs and low risk drives and pathways, has been used where community or private care is available to maintain these potentially attractive site features.

Key aspects of raingarden design include:

1. gentle side slopes with water collected at the surface
2. a free-draining soil, sometimes with an underdrain to avoid permanent wetness
3. a minimum of 450mm improved topsoil with up to 20% course compost
4. garden plants that can tolerate occasional submersion and wet soil – this includes most garden plants other than those particularly adapted to dry conditions
5. an overflow in case of heavy rain or impeded drainage.



Bioretention Raingardens

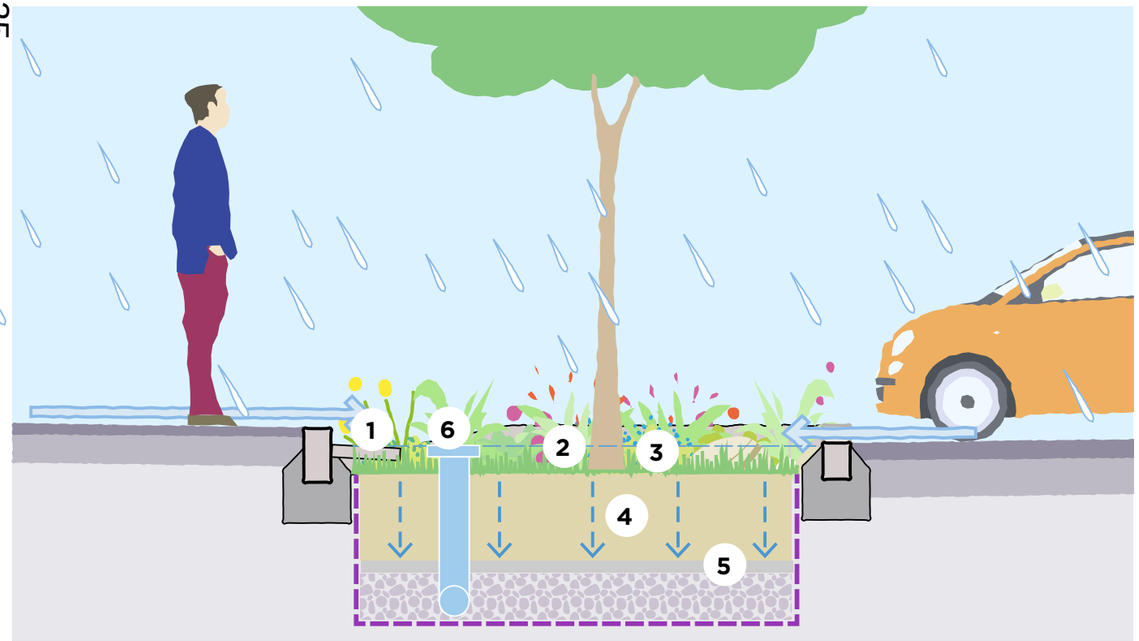
A bioretention structure differs from a raingarden in that it employs an engineered top soil and is used to manage polluted urban runoff in street locations and carparks. These features can contribute significantly to the urban scene so should be designed to meet urban design standards.

The runoff entering bioretention features will normally carry silt and pollution from vehicles and urban street use. Therefore, some maintenance should be expected to remove the build-up of inorganic silt.

The free-draining nature of engineered soils leads to the washing away of nutrients from the soil. The proportion of organic matter should be relatively high and replenished yearly by the application of a mulch layer of well composted greenwaste or shredded plant matter arising from maintenance.

Key design aspects for bioretention raingardens include;

1. silt collection in forebays
2. space above the soil profile for water collection and stilling before infiltration through the engineered soil
3. a surface mulch of organic matter, grit or gravel protects the infiltration capacity of the soil
4. a free draining soil, 450 -600mm deep, with 20-30% organic matter cleans, stores and conveys runoff to a drainage layer
5. a transition layer of grit and/or sand protects the under-drained drainage layer that discharges to an outfall
6. a surface overflow for heavy rain or in the event of blockage.



Permeable surfaces

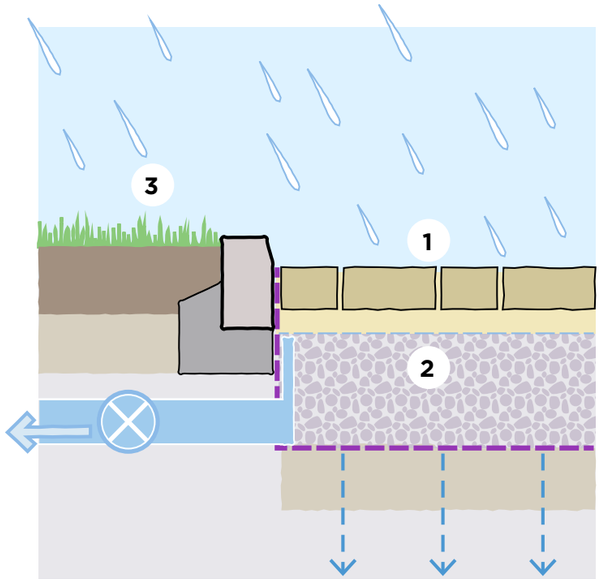
Permeable surfaces enable SuDS designers to direct rainfall straight into a SuDS structure for cleaning and storage or infiltration into the ground.

There are a number of permeable surfaces available. All should have in common:

1. a pervious surface to allow water through the pavement surface
2. an open-graded sub-base layer that provides structural strength to the pavement with about 30% by volume available for water storage.
3. Silt washed off adjacent landscape areas can lead to localised surface clogging. This risk can be managed through design detailing as follows:
   - slope adjacent landscape areas away
   - use paved or turfed surfaces to adjacent areas
   - soil in adjacent planting beds should be min. 50mm below the pavement edge
   - adjacent planting should include dense ground cover to bind the soil in place
   - slopes running toward permeable surfaces should have a depression and ideally an underdrain before reaching the pervious surface.

The design and construction of pervious pavements are covered by guidance in the SuDS Manual (Section 20) and the Interpave website www.paving.org.uk

There are no reported issues with surface clogging under normal use. A dedicated maintenance may be required after between 10 and 20 years of use comprising a brush and suction removal of grit joints and joint replacement.

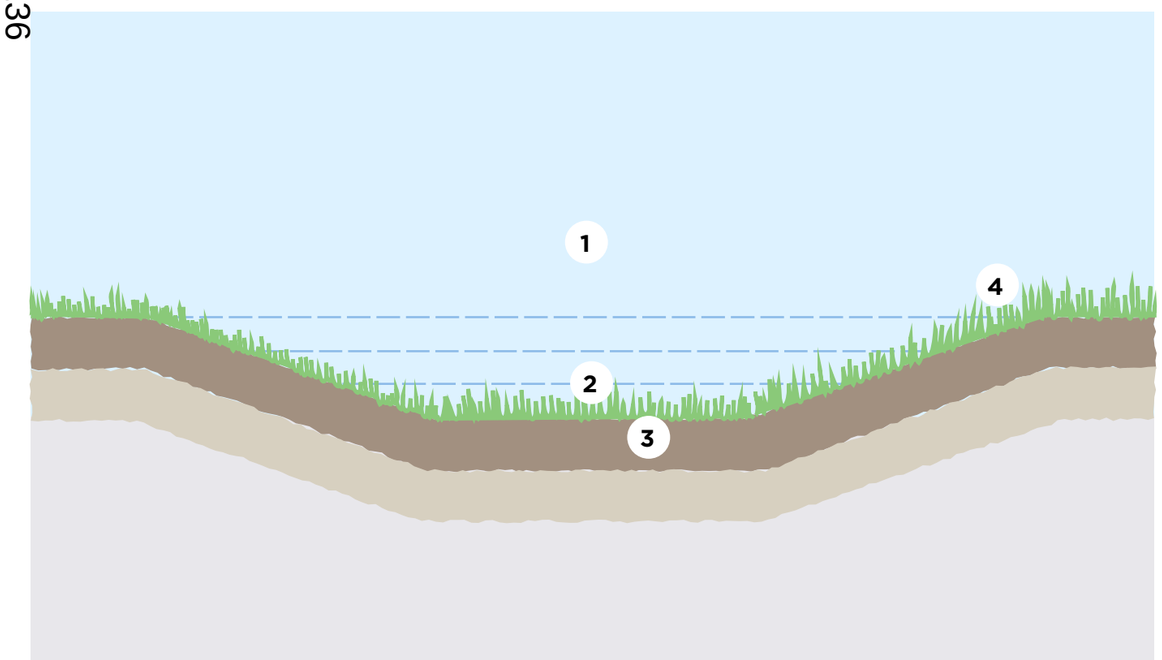


Soft landscape areas are set below kerb level at this permeable paving installation. Almac Car Park, Limerick, Ireland.

Swale

Swales are shallow, flat bottomed vegetated channels which can collect, treat, convey and store runoff.

1. The basic profile is a 1 in 3 or 1 in 4 side slope to a flat base falling at no more than 1 in 50 to prevent erosion.
2. Base width less than 1m wide will increase the risk of erosion and ditch forming, conversely, base width wider than 3m a meandering channel can develop.
3. 150mm clean topsoil over subsoil. Ripping or light harrowing will improve establishment of the swale by providing a key for the topsoil, encourage deep rooting and assist infiltration.
4. Where swale vegetation is kept less than 100mm, the shoulders at the top of the swale can be 'scalped' leaving bare soil. The shoulders should therefore be rounded to prevent this happening.
5. Where inlet flows are concentrated to points through an upstand kerb an erosion apron may be needed.

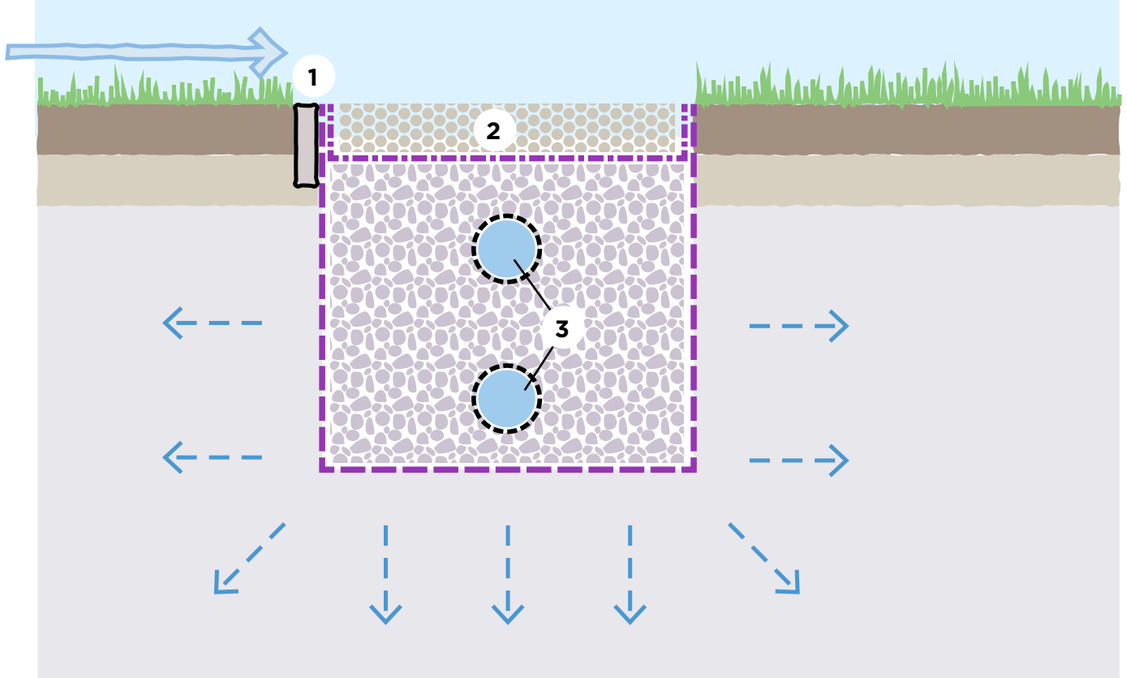


Filter drains

Filter drains, sometimes called a French drain after Henry Flagg French (1813-1885), is an open stone filled trench.

1. Runoff should ideally cross the long edge of the trench as a sheet. This may require a temporary level timber board along the leading edge to prevent erosion of unconsolidated soil.
2. A sacrificial top layer may be considered at the top of the drain to trap any silt for simple removal. Alternatively, a grass filter strip placed in front of the filter drain will reduce potential for clogging.
3. A lower perforated pipe will assist discharge and an upper perforated pipe can act as an overflow. However, neither may be necessary depending on the design and location.

Most filter drains are designed with geotextile lining. Many geotextiles are susceptible to blinding from fine materials in soils. An alterative liner is the use of hessian which will biodegrade over time by the time soils around the filter drain will have stabilised.



Channels and rills

Sett Channels and rills keep rainwater at or near the surface. This is important as it allows water to flow directly into SuDS features reducing cost, trip hazards and the inconvenience of deep structures in the landscape.

In some places a grated surface channel may be more appropriate but the mesh size should not be too small or the grating will be prone to blockage.

Collecting runoff from a road can be more difficult where there is a path present and a flush kerb inlet or chute gully may be needed.

A planted rill at Bewdley School Science Block.

A granite sett channel collecting and conveying runoff at Holland Park, London.

Use of pipes

Although SuDS are delivered without the requirement for extensive piped networks, short lengths of pipe can still be very useful in providing connections under roads, footpaths and other crossing points. Key points to consider are as follows:

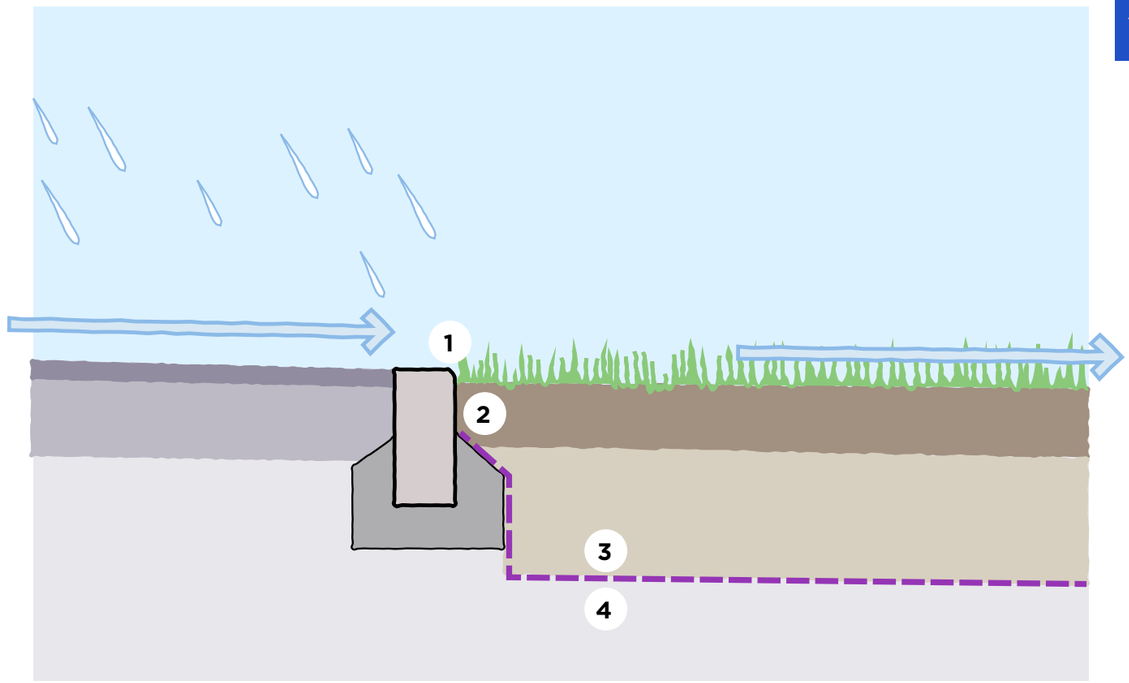
- Short lengths of pipework should allow direct rodding from one end of the pipe to the other without the need for internal chambers.
- Inlets and outlets should be designed so that they are not prone to blockage.
- An exceedance flow path should be integrated into the development surface above pipework to ensure that unpredictable flows are directed SuDS immediately after the crossing.
- The depth of the downstream component should not be artificially increased due to a requirement for structural cover over pipework. Different pipe materials or concrete surround can be considered to minimise cover - as used for driveway crossings at the Devonshire Hill project above.

Concrete pipe surround has been used here to provide minimal cover for a driveway crossing at Devonshire Hill, Haringey.

Filter strips

The hard edge from a pavement to a filter strip is generally defined by a kerb. Filter strips are effective at removing silt at source and will connect to SuDS feature such as a swale after a short distance.

1. Provision of a small drop across the edge of the kerb allows runoff to move freely off the pavement.
2. The concrete haunch should be finished at minimum of 100mm below the surface to ensure good grass growth up to the edge of the pavement.
3. Free draining soils - a protective liner should be situated at least 300mm below clean sub-soil for an agreed distance offset from the pavement to prevent pollution migrating through subsoils to groundwater.
4. Clay soils - runoff will flow across the surface with limited potential for infiltration negating the requirement for a liner.



Basins, wetlands and ponds

1. Reasonably clean water, through use of source control, should flow into site control components at or near the surface in a channel or swale.

2. Where a pipe entry is unavoidable it should flow through a safe and visually neutral headwall, such as a mitred concrete headwall or stainless steel gabion basket inlet.

Avoid using riprap as a form of erosion control, as loose stones easily move around and cause a nuisance for maintenance teams.

This basin at Springhill Cohousing in Stroud can be used throughout the year.

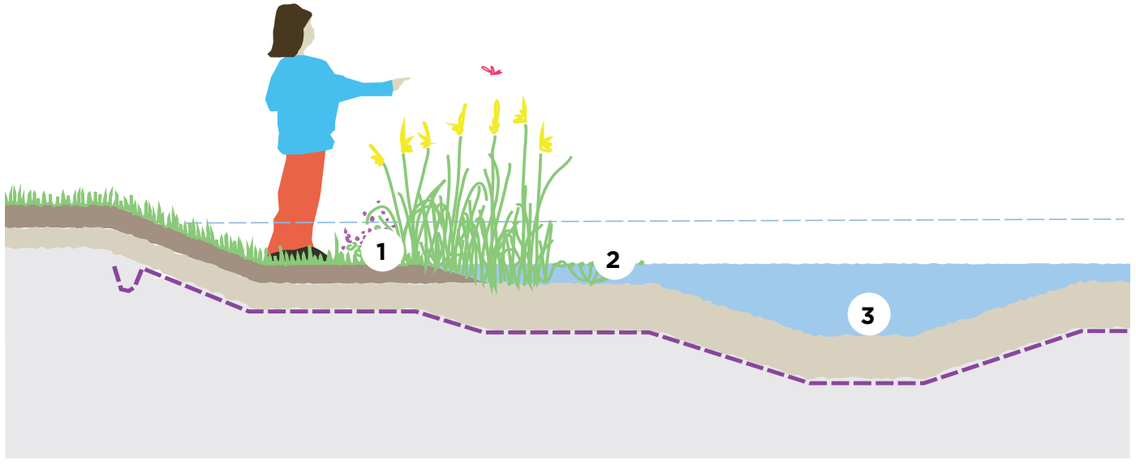
Facing: An example of 'safety be design': these children are doing a dance and movement class in a SuDS storage area at Red Hill School.

The safety considerations in basin, wetland and pond design should be considered carefully.

1. The profile of the structure should allow easy and safe access for people and maintenance machinery. Slopes should not exceed 1 in 3 or 1 in 4 and in larger basins access ramps with a more gentle slope should be considered. The idea of a series of slopes and level benches is now accepted as an appropriate detailing for SuDS basins and ponds.

2. The overall depth of temporary storage should not normally exceed 600mm as this depth is critical for a feeling of safety in water. The bottom of the temporary storage dry basin should slope gently so that most of the time the base is firm and dry. Shallow micropools and wetland habitat should be integrated carefully into the basin as they will not be visible when the basin is full of water.

3. Permanent pond depth need not exceed 600mm as this is a common depth of natural ponds and where most biological activity occurs. However, a depth 600mm without regular maintenance means that vegetation will cover the pond in time. Most wetland edge plants cannot colonise beyond 1.2m depth of permanent water. Therefore, an deeper area in the centre of the pond, with surrounding shallower benches can be considered if open water is desired. Effective storage of 600mm over permanent water depth of 1.2m provides a total potential stored depth of 1.8m and the design must take this into account.



4. All hard engineered structures should be set back 1m from permanent water edge, which will prevent drowning in the event of concussion.

5. Protective fencing will not keep children out of ponds and merely acknowledges a dangerous condition. Well designed ponds should be easy to exit and accessible for rescue if this is required.

6. Pond depths and profiles should not be designed for ease of open water swimming. This can be achieved by varying the profile of the pond throughout.

7. Where unsupervised toddlers may be expected a 600-700mm picket fence should be considered as this stops most toddlers and allows adults to easily step over the fence for rescue.

8. There must be an acceptance by the community that open water is part of a landscape character. It is useful to sensitively communicate health and safety messages identifying the presence of permanent and temporary water using well designed informative signage.

9. The use of ‘danger – deep water’ signs and lifebuoys should be avoided, as they imply that risks have not been sufficiently catered for by design.

This project failed to adequately consider health and safety when designing attenuation features into a residential pocket park. There is now no public access allowed. There should be no need for such measures if properly designed.

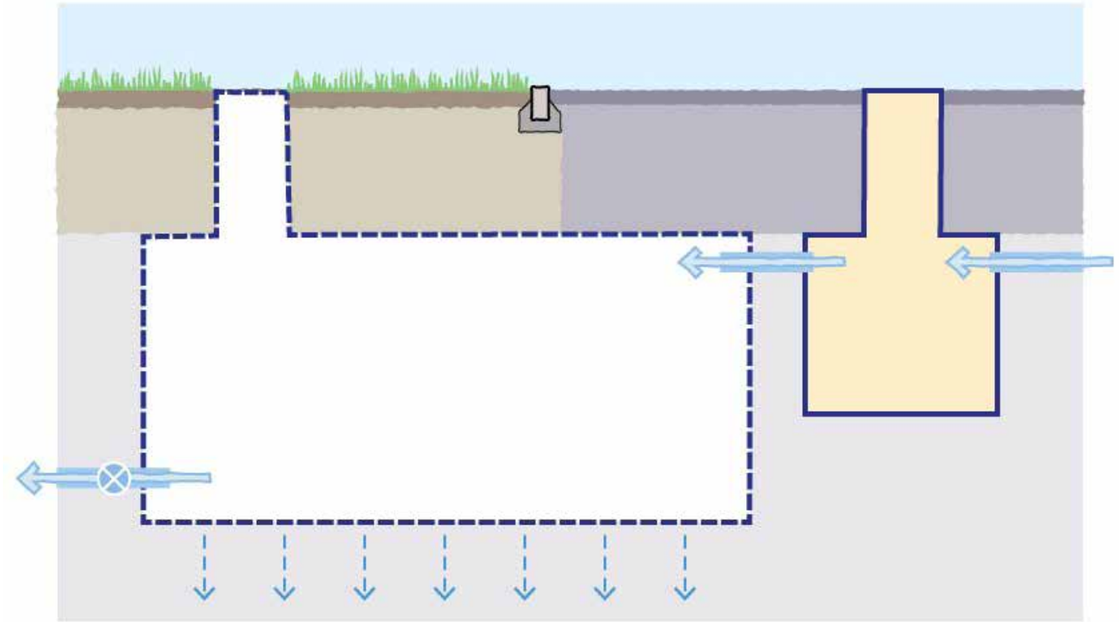
9.11.5 Storage structures

Attenuation storage in underground structures is currently utilised throughout construction industry with may applications being in the form of geocellular tanks. Simply providing underground tanks should not be confused with a full SuDS approach; however, they can form part of the SuDS management train.

The introduction of geocellular structures is still relatively recent in the construction industry and the long term implications of their use is still being understood. The SuDS manual (Section 21.1) clarifies that:

- *Where storage is in an underground tank, failures and blockages tend not to get noticed, which may mean that the consequences of failure can be catastrophic.*
- *Underground storage tanks do not have inherent treatment capacity and therefore require integration with a SuDS management train.*
- *Geocellular systems and plastic arches tend not to be easily accessible for inspection or cleaning, so very effective upstream treatment is required to ensure adequate sediment removal.*
- *The structural design of geocellular systems tends to be more complex and there have been a number of collapses of these systems caused by inadequate design. (see Mallett et al, 2014, and O'Brien et al, in press) (see C737)*

Page 140



In addition, to the statements from the SuDS Manual the following should also be considered:

- There are risks of structural failure due to construction loading, which may exceed design life loading that the designer may not be aware of.
- There are a wide range of attenuation products each with its own loading characteristics. Surety must be provided that a specified product is not swapped for one of inferior quality during the construction phase.
- Guarantees and warranties are dependent on the survival of product manufacturers.

Where underground storage is preferred after a full exploration of the available options the designer should demonstrate that:

- Robust silt removal has been provided through means of filtration (bioretention, permeable pavement) or other source control SuDS components. Catchpits will not be accepted as a demonstrable form of silt removal. The SuDS manual (Section 4.1) clarifies that sediments within catchpits can be remobilised and washed downsteam. Equally, gullypots are suggested by Table 26.15 to provide negligible to zero treatment (Ellis et al, 2012).
- Underground structures require structural design consideration even if they are not receiving vehicular loading. CIRIA report C737 outlines the design requirements for geocellular tanks. The SuDS Manual (Table 21.1) provides a summary of the structural design requirements using a risk classification system (Scored between 0-3). Designers should demonstrate that the classification system has been followed and present the appropriate level of design information accordingly.

Design Note:

Where the stated design life of the tank does not meet the design life of the development, the design should demonstrate how the structure will be replaced whist maintaining the functionality of the drainage system and the scheme. Consideration should also be given to funding mechanism for undertaking these replacement works.

9.12 Management of the SuDS landscape

9.12.1 The principles of SuDS management

All designed landscapes require some level of management. Where maintenance is not carried out development will evolve towards woodland or an urban wasteland.

This document introduces a **'passive maintenance'** approach for SuDS. This does not imply no maintenance but rather that much of the care for SuDS is site management rather than dedicated SuDS maintenance.

Hydrocarbons and other organic based pollution such as which wash off hard surfaces is broken down by natural processes (**passive treatment**), within many SuDS components meaning that there is no long term build up of organic pollution. Heavy metals and inorganic pollutants are trapped within Source controls at low concentrations and therefore form no threat to amenity features or aquatic environments.

This is different to 'intervention' maintenance which is required for conventional drainage to remove toxic liquor from gully sumps or oil and grit from interceptors and separators which can be costly and in many cases not completed, rendering the treatment function redundant. Intervention maintenance can also be required for SuDS to remove silt, however through the use of source controls this requirement will be minimised.

Importantly, where SuDS form part of a landscape (which would be present regardless of SuDS), this minimal attention should be considered as site care and not dedicated SuDS care. The cleaning of gullies and pipe work is not needed which reduces overall management costs.

Passive maintenance is therefore linked to integrated SuDS design.

Hopwood Park MSA M42.
A light tracked excavator removes aquatic vegetation to de-water next to the wetland, before moving to a wildlife pile.

9.12.2 The SuDS Management Plan

A SuDS Management Plan is a document that describes the development, the place of SuDS in managing rainfall and can include landscape maintenance. It will describe the aspirations for the development and expected changes over time including any future expansion or redevelopment.

The plan will provide a brief explanation of SuDS, how the SuDS infrastructure on the site operates and the benefits of retaining functionality of SuDS.

SuDS management will be explained including anticipated changes over time.

The management plan will include a Schedule of Work covering the following:

- maintenance tasks identifying frequency of undertaking
- waste management requirements (including EA exemption)
- a pricing schedule for the maintenance contractor where appropriate with any specification notes required to explain technical details.

Site management usually requires an element of regular site attendance, often monthly, which corresponds with most SuDS maintenance. Occasional and potential remedial maintenance should also be covered by the plan.

- Regular maintenance – SuDS visits should be at a monthly frequency to match everyday site management visits.
- Occasional maintenance – covers tasks where the frequency cannot be predicted accurately or is infrequent.
- Remedial maintenance – covers work that cannot be anticipated or is a result of design failure. Damage may include, for instance, rutting where unexpected vehicle access has occurred on wet ground. Replacement of items which have a defined lifespan, such as geocellular tanks should be covered here or provisions made elsewhere.

Design Note:

Information in the management plan should be conveyed in a manner that is understandable to Site Operatives. Use of technical terms and unnecessary information should be avoided.

The Maintenance Schedule and key plan identifying locations of key features should not exceed a double sided A4 which can be laminated and retained in the operatives work van.

9.12.3 Example of SuDS and Site Maintenance

Type	Activity	Normal site care (Site) or SuDS-specific maintenance (SuDS)	Suggested frequency
Regular Maintenance			
LItter	Pick up all litter in SUDS Landscape areas along with remainder of the site – remove from site	Site	1 visit monthly
Grass	Mow all grass verges, paths and amenity grass at 35-50mm with 75mm max. Leaving cuttings in situ	Site	As required or 1 visit monthly
Grass	Mow all dry swales, dry SUDS basins and margins to low flow channels and other SUDS features at 100mm with 150mm max. Cut wet swales or basins annually as wildflower areas – 1st and last cuts to be collected	Site	4-8 visits per year or as required
Grass	Wildflower areas strimmed to 100mm in Sept or at end of school holidays – all cuttings removed Or Wildflower areas strimmed to 100mm on 3 year rotation – 30% each year – all cuttings removed	Site	1 visit annually 1 visit annually
inlets & outlets	Inspect monthly, remove silt from slab aprons and debris. Strim 1m round for access	SuDS	1 visit monthly
Permeable paving	Sweep all paving regularly to keep surface tidy	Site	1 visit annually or as required
Occasional Tasks			
Permeable paving	Sweep and suction brush permeable paving when ponding occurs	SuDS	As required - estimate 10-15 year intervals
Flow controls	Annual inspection of control chambers - remove silt and check free flow	SuDS	1 visit annually
Wetland & pond	Wetland vegetation to be cut at 100mm on 3 – 5 year rotation or 30% each year. All cuttings to be removed to wildlife piles or from site.	Site	As required
Silt	Inspect swales, ponds, wetlands annually for silt accumulation	Site & SuDS	1 visit annually
Silt	Excavate silt, stack and dry within 10m of the SUDS feature, but outside the design profile where water flows. Spread, rake and overseed.	Site & SuDS	As required
Native planting	Remove lower branches where necessary to ensure good ground cover to protect soil profile from erosion.	SuDS	1 visit annually
Remedial Work			
General SuDS	Inspect SuDS system to check for damage or failure when carrying out other tasks. Undertake remedial work as required.	SuDS	Monthly As required

9.12.4 Silt and waste management

Silt and sediment removal is often considered a major element of SuDS management. In most cases where SuDS features are located at the surface silt accumulates slowly and can be removed easily. Management of silt becomes more difficult and costly at the end of the management train, particularly in ponds and wetlands.

Where silt has accumulated in SuDS components downstream or the design has specifically included a silt collection feature, for instance in SuDS retrofit schemes, it is important to monitor silt accumulation visually and by simple monitoring.

Silt removed from most low to medium risk sites can be de-watered and land applied within the site but outside the SuDS component profile. The EA will not pursue an application for an environmental permit where the requirements of Regulatory Position Statement 055 are met.

Silt management and removal from site should follow the protocols set out in the SuDS Manual Chapter 32 p699

SuDS vegetation green waste can be managed in the same way as site green waste, either on site in wildlife piles, compost arrangements or taken off site.

The use of composted green waste or chipped woody material should be considered for raingardens, bioretention or any other planted feature on site.

Any waste considered to be contaminated should be evaluated as set out in the SUDS Manual Chapter 33 – Waste management p709

EA Regulator Position Statement 055
www.gov.uk/government/uploads/system/uploads/attachment_data/file/525315/LIT_9936.pdf

Sheffield Grey to Green : an excellent council-led SuDS project with SuDS advice from McCloy Consulting and Robert Bray Associates.

Acronyms used in this guide :

AEP	Annual Event Probability
AONB	Area of Outstanding Natural Beauty
BGS	British Geological Survey
BRE	Building Research Establishment
CCA	Climate Change Allowance
CDM	Construction (Design & Management) Regulations
CIRIA	Construction Industry Research and Information Association
Cv	Coefficient of volumetric runoff
DEFRA	Department for Environment Food & Rural Affairs
EA	Environment Agency
FEH	Flood Estimation Handbook
GWSPZ	Groundwater Source Protection Zone
IoH	Institute of Hydrology
LASOO	Local Authority SuDS Officer Organisation
LLFA	Lead Local Flood Authority
LPA	Local Planning Authority
NPPF	National Planning Policy Framework
NSTS	Non-Statutory Technical Standards
PPG	Planning Practice Guidance
RefH2	The Revitalised Flood Hydrograph Model
SAC	Special Area of Conservation
SFRA	Strategic Flood Risk Assessment
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
SWMP	Surface Water Management Plan
WaSC	Water and Sewerage Company
WFD	Water Framework Directive

McCloy Consulting

Robert Bray Associates

Sustainable Drainage Consultants
Landscape Architects

Committee: Cabinet

Date:

Wards: All

Subject: Renewal of Shared Enforcement Agent (bailiff) Service with Sutton

Lead officer: Caroline Holland

Lead member: Councillor Mark Allison

Contact officer: David Keppler

Recommendations:

1. To agree the renewal of the shared Enforcement Agent (bailiff) service with Sutton council from August 2018
2. Delegate to the Director of Corporate Services authority to approve and negotiate any new contract and surplus allocation for additional parking debt income collected

1 PURPOSE OF REPORT AND EXECUTIVE SUMMARY

1.1. This report details the proposed extension of the shared Enforcement Agent service with Sutton council.

2 DETAILS

2.1. Merton have operated an in-house bailiff service since 2006 which over the years expanded to incorporate collection of council tax, business rates and parking debts.

2.2. The advantages of an in house service over a private company include having more control over the strategy for collecting debts, ensuring a more customer focused approach to collection is adopted, employing local staff and retaining any surplus from the operation.

2.3. As part of the budget process on 12 December 2011 Cabinet agreed the implementation of a shared bailiff service with Sutton council with a proposed budget saving through additional income to be implemented from 2013/14 financial year.

2.4. During 2012 discussions with Sutton resulted in the shared service being implemented from 1 August 2012 for a five year period with the option of an additional year.

2.5. The shared service arrangement with Sutton only covered work relating to debt owed to Sutton council. The cost of this service was met by the fees and statutory fees that can be charged for collecting debt and then any surplus was split equally between Merton and Sutton.

2.6. Merton's initial business case was proposed an income surplus of £150,000 per year based on estimated volume of cases and fees charged.

2.7. Following a complaint the Ombudsman recommended that Merton review the way it calculated its bailiff charges. Rather than a set fee be charged consideration had to be given to the actual time a bailiff spent on a case including travel time. This resulted in a lower fee structure being implemented.

2.8. In April 2013 the Government introduced the Taking Control of Goods Act which changed the way bailiffs could work and implemented the only statutory fees that could be charged.

2.9. The changes mentioned above resulted in the initial business case estimate not being achieved throughout the term of the contract, although both Councils achieved a surplus on operating costs.

2.10. The shared service did make a surplus each year and this is detailed in appendix 1

2.11. In addition to the financial gain of operating an in house and shared service a more customer focused approach is adopted and this strategy is determined by the Merton and Sutton shared board.

2.12. The approach allows for us to go beyond statutory minimum standards. Examples of this are:-

- Customers are given an extended period of 7 days, to the statutory requirement, at Compliance stage (where a letter is sent before an enforcement agent is instructed) to pay or make a payment arrangement.
- Enforcement agents are encouraged to enter into payment arrangements, officers can make arrangements on cases, and removals are only ever undertaken as a last resort.
- The CAB are given direct access to managers to escalate complaints or cases.
- In the past year specialised training has identified and delivered, on identifying vulnerability and being dementia friendly to all enforcement agents.
- Under the Taking Control of Goods Act, persons only have to reach Level 2 to become an enforcement officer. All of our enforcement officers have to reach a minimum of Level 3 (higher standard) of the scheme.
- (All of the above are also applicable for the Merton only service and the collection of Merton cases).

2.13. Both council's use external companies to collect "out of area" cases. Where a debtor has moved away or their vehicle is registered elsewhere in the country external companies are used to try to collect the debts.

2.14. The renewal of the shared service arrangement will be for a three year period with an option to extend by an additional year twice. This could result in a five year contract overall.

2.15. In the past few months there has been an increase in volume of unpaid parking fines from Sutton and due to an extension of camera offences in Sutton this is likely to grow.

Sutton feel that they should receive a larger proportion of any surplus income from this additional growth of work and negotiations are continuing. At this stage nothing has been agreed other than any re-distribution will only be for the additional income derived from the increase in parking debts.

3 ALTERNATIVE OPTIONS

3.1. Not to extend the shared service arrangement and let Sutton make their own arrangements.

3.2. If the shared service arrangement was not extended then TUPE arrangements would need to be considered for staff in the current team alongside the need to find alternative savings for the loss of income.

4 CONSULTATION UNDERTAKEN OR PROPOSED

4.1. Sutton council have agreed this proposal to extend the arrangement under delegated powers from committee.

4.2. Consultation with Sutton council is ongoing regarding the extension of the contract, period, allocation of the surplus for the additional parking debts and the possibility of a joint procurement for external enforcement agent contractor, for out of area debts.

5 TIMETABLE

5.1. The timetable for renewing the shared service contract is detailed below

Pre-contract discussions	January 2018 to March 2018
Initial agreement from Sutton to extend contract	March 2018
Negotiations on contract terms	April 2018 to July 2018
Drafting of new contract	May 2018 to July 2018
Agreement from Cabinet	June 2018
Formalising staffing arrangements	July 2018
New contract commences	August 2018

6 FINANCIAL, RESOURCE AND PROPERTY IMPLICATIONS

6.1. The original business case for the shared service proposed that Merton would generate £150,000 surplus per year based on estimated volume of cases and the fee structure at the time of the business case.

6.2. While this has not been achieved the business model for service delivery and the structure have proved sound with both Council's seeing a surplus on operating costs.

6.3. Appendix 1 details the cost of the shared service, income received through fees and surplus for each council.

6.4. Any cessation of this service delivery model may result in TUPE being applied to current personnel and a process will be undertaken in accordance with HR processes and best practice. There would also be a need to find alternative savings to offset the loss of income.

7 LEGAL AND STATUTORY IMPLICATIONS

7.1. If the shared service is extended and there are changes regarding the surplus allocation for additional parking debt income the original collaboration agreement should either be amended to reflect the changes or the Council will be required to enter into a new agreement with Sutton Council.

8 HUMAN RIGHTS, EQUALITIES AND COMMUNITY COHESION IMPLICATIONS

8.1. The Taking Control of Goods Act and best practice stipulates how vulnerable clients should be dealt with the in house team strictly adheres to these processes. Additional training on dealing with vulnerable clients has been provided and all enforcement agents have been on Dementia training.

8.2. Sutton council have signed a council tax protocol for council tax collection with the CAB which the shared service adheres to.

9 CRIME AND DISORDER IMPLICATIONS

9.1. None for the purpose of this report

10 RISK MANAGEMENT AND HEALTH AND SAFETY IMPLICATIONS

10.1. Risk assessments have been undertaken on the service and over recent years new measures put in place to help and support the team

10.2. All enforcement agents are issued with stab vests and body worn cameras to protect against aggressive and potentially aggressive customers

10.3. All vehicles have trackers so that the office are able to identify if one has been in the same location for too long and measures are taken to ensure the officer is safe.

11 APPENDICES – THE FOLLOWING DOCUMENTS ARE TO BE PUBLISHED WITH THIS REPORT AND FORM PART OF THE REPORT

- Appendix 1 – Financial Information from the Shared Service (exempt or confidential document)

12 BACKGROUND PAPERS

12.1.

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Cabinet

Date: 25 June 2018

Subject: Budget Outturn 2017/18

Lead officer: Roger Kershaw

Lead member: Mark Allison

Recommendations:

A. That Cabinet note the provisional revenue outturn for 2017/18

B. That Cabinet consider the outturn position on Capital and approve the Slippage into 2018/19 and other adjustments detailed in Appendix 3C and Section 7 of the report

C. That Cabinet approve the £60,000 Section 106 funding for Beddington Lane Cycle Route.

1 PURPOSE OF REPORT AND EXECUTIVE SUMMARY

This report outlines the provisional out-turn position for the last financial year (2017/18) and the issues that arise from it.

Section 2 – Summarises the draft outturn position of the Authority.

Section 3 – Reviews the detailed outturn position for service departments

Section 4 – Reviews the outturn position for corporate items

Section 5 – Provides other information

Section 6 –Provides information on Reserves

Section 7 - Provides information on the capital outturn

Section 2 – REVENUE OUTTURN 2017/18

The following table summarises the outturn position for 2017/18.

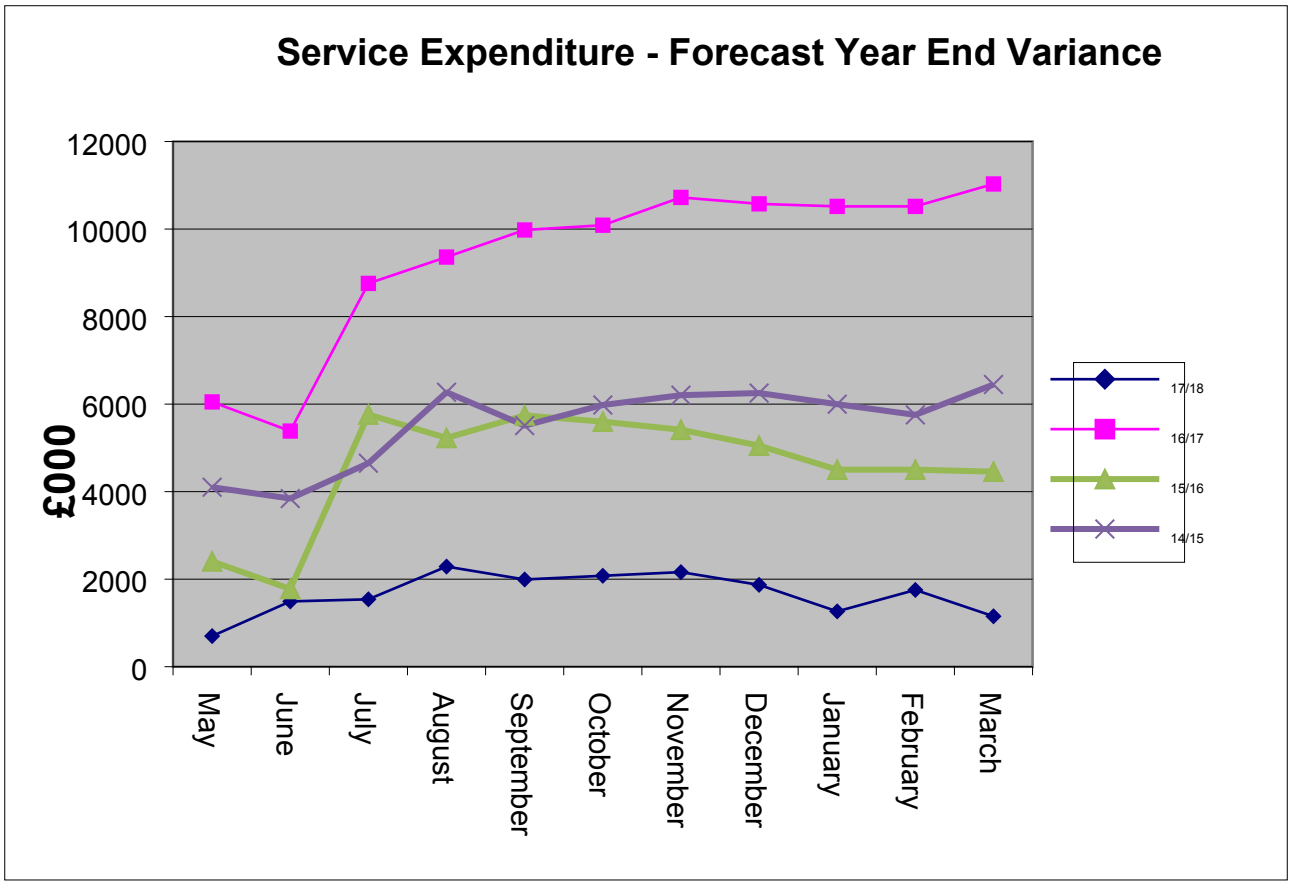
OUTTURN	2017/18 Current Budget (Net) £000s	2017/18 Current Budget (excl. overheads) £000s	2017/18 Outturn (excl. overheads) £000s	2017/18 Outturn Variance £000s	Dec 2017 (P9) Forecast Variance £000s	2016/17 variance excl overheads £000s
Department						
Corporate Services	9,932	25,287	24,475	(812)	(533)	(1,287)
Children, Schools and Families	54,691	49,626	51,875	2,249	2,134	1,154
Community and Housing	64,480	60,022	60,944	922	1,082	10,140
Environment & Regeneration	18,271	12,844	11,633	(1,211)	(812)	1,011
NET SERVICE EXPENDITURE	**147,374**	**147,779**	**148,927**	**1,148**	**1,870**	**11,018**
Corporate Provisions	1,437	1,032	106	(926)	(1,344)	(5,035)
TOTAL GENERAL FUND	**148,811**	**148,811**	**149,033**	**222**	**526**	**5,983**
Business Rates	(35,483)	(35,483)	(35,302)	181	0	0
Grants	(28,999)	(28,999)	(29,668)	(669)	82	(536)
Council Tax and Collection Fund	(84,329)	(84,329)	(84,329)	0	0	0
FUNDING	**(148,811)**	**(148,811)**	**(149,299)**	**(488)**	**82**	**(536)**
NET (UNDER)/OVERSPEND	**0**	**0**	**(266)**	**(266)**	**608**	**5,447**
Transfers to Reserves	(0)	(0)	266	266	(608)	(5,447)

At the end of the financial year 2017/18 the overall underspend was £266k (£5,447k overspend or 1% of the gross budget in 2016/17)

The overall underspend on the General Fund has been transferred to the balancing the budget reserve.

The significant overspend of the last two years has been addressed by providing growth in the 2017/18 budget.

Chief officers and finance officers will need to continue monitoring budgets closely in 18/19 to prevent future year overspending and calls on reserves as there are still budget pressures on demand led services.


Service Expenditure - Forecast Year End Variance
£000
12000
10000
8000
6000
4000
2000
0
May
June
July
August
September
October
November
December
January
February
March
17/18
16/17
15/16
14/15

Section 3 Detailed Service Spending

Corporate Services

Division	2017/18 Current Budget (£000)	2017/18 Outturn (£000)	Variance (£000)	Forecast variance at year-end - December (£000)	2016/17 Outturn Variance (£000)
Business Improvement	2,780	2,783	3	-30	47
Infrastructure & Transactions	9,307	9,431	123	64	5
Resources	6,490	6,435	-55	26	-28
Human Resources	2,007	1,801	-206	-26	-40
Corporate Governance	2,357	2,127	-230	-83	16
Customer Services	2,314	1,846	-469	-288	-16
Corporate Items including redundancy costs	32	54	22	-196	70
Total (controllable)	**25,287**	**24,477**	**-812**	**-533**	**54**

Overview
At the end of 2017/18, the Corporate Services (CS) department has underspent by £812k. This is an increase of £279k from the underspend reported at the end of December.

Business Improvement - £3k over
A minor variation from budget at the end of the financial year.

Infrastructure & Transactions - £123k over
There were budget pressures in several teams throughout the year.

The professional development centre (Chaucer Centre) under-achieved on income by £74k. The number of bookings in the year was lower than in previous years. This will be continue to be monitored and action taken to improve booking figures where possible.

The transactional services team overspent by £122k mainly because saving CS70 (charging for paper copies of invoices) was unachievable due to delays in the implementation of e5, SharePoint and EDRMS.

The Garth Road income target under-achieved by £58k and the Commercial Services team overspent by £80k mainly on staffing costs. This team is currently being restructured and therefore agency staff are in post until the vacant posts are recruited into. This team is essential in driving and delivering procurement savings across the Council.

These overspends were partly offset by income relating to the new rental agreement with CHAS 2013 Limited for occupancy of half of the 14th floor in the Civic Centre.

Resources - £55k under
There were a number of vacant posts within the division during the year. Also, the legal budget underspent by £45k due to reduced demand within Corporate Services during the year.

There were forecast overspends on staffing including one case of long term sickness. Ongoing additional staffing costs of e5 being were funded within the division as system changes were identified and implemented. Some additional support days were necessary from the provider for system changes. The bank reconciliation function also had additional consultancy days from the provider to increase automation.

Human Resources – £206k under
There were a number of vacant posts within the division throughout the year, in particular within the Learning & Development and Business Partnership functions. These are 18/19 savings (£185k) that have been achieved early.

The final figures for the payroll charges from Kingston were also lower than expected.

Corporate Governance - £230k under
The underspend was partly due to a £62k underspend within Internal Audit & Benefits Investigation where a 2018/19 saving has been captured early. There were other forecast underspends on non salary budgets across the division including on Democratic services where the underspend was £25k.

The South London legal partnership (SLLp) achieved an overall surplus of £47k over the financial year. The surplus was shared amongst the client boroughs based on relative usage throughout the year. Merton has retained £10k of this surplus.

There was an over recovery of other legal income (outside of SLLp) of £60k during the year.

Customer Services - £468k under
The Merton bailiff service achieved a surplus in 2017/18. The joint service with Sutton also created a surplus of which 50% was retained by Merton under the agreement.
It has been agreed at the recent joint Board meeting that the service will be extended, subject to Cabinet approval , see paper on agenda.

There was an underspend of £254k on the Benefits Administration budget mainly due to the receipt of some non-recurring income from the Department of Work and Pensions to fund a number of schemes.

Corporate Items - £22k over
The table below summarises the main budget and outturn figures within Corporate Items:

Division	2017/18 Current Budget (£000)	2017/18 Outturn (£000)	Variance (£000)	Forecast variance at year-end - December (£000)
Redundancy	1,096	1,472	376	398
Enterprise Allowance licences and cyber security	0	208	208	198
Coroner's Court	246	382	136	134
Housing Benefit	35	-1,538	-1,573	-740
Other grants/income	-340	-470	-130	-186
Transfer to reserves to fund delayed savings/ pressures	-1,005	0	1,005	0
Total	**32**	**54**	**22**	**-196**

Redundancy costs overspent by £376k during the year. There was an overspend of £136k on Coroner's Court fees which included a cost of £39k for the enquiry into the terrorist attack at Westminster Bridge (this accounting treatment is consistent with that of the other borough partners).

There was unbudgeted expenditure of £60k that addressed cyber security issues following recent security threats. The additional cost of Microsoft Enterprise licenses of £148k was also met from this budget.

The Housing Benefit budget shows a surplus of £1.5m on the account due to the subsidy received on overpayments. At period 9, a lower surplus of £740k was forecast. The table below provides the details:

Division	2017/18 Outturn Variance (£000)	Forecast Outturn variance - December (£000)	Variance (£000)
Overall surplus on account	-1,573	-1,956	383
Increase to bad debt provision	0	1,216	-1,216
Remaining surplus on account	**-1,573**	**-740**	**-833**

The year-end review of the housing benefits provision did not require a top up to the provision as expected during the period 9 forecast. The provision rate percentages applied are based on collection rates calculated at year end.

An amount of £1,005k has been transferred to the Corporate Services reserve to fund an energy scheme saving which cannot be met in 18/19 due to slippage in the capital spend and a number of budget pressures in future years.

Environment & Regeneration

Environment & Regeneration	2017/18 Current Budget £000	Full year Outturn (March) £000	Outturn Variance (March) £000	Forecast Variance at year end (Dec) £000	2016/17 Outturn Variance £000
Public Protection	(10,480)	(12,083)	(1,603)	(1,711)	1,290
Public Space	15,299	15,932	633	840	510
Senior Management	1,004	1,007	3	1	(44)
Sustainable Communities	7,021	6,777	(244)	58	(745)
Total (Controllable)	**12,844**	**11,633**	**(1,211)**	**(812)**	**1,011**

Description	2017/18 Current Budget £000	Outturn Variance (March) £000	Forecast Variance at year end (Dec) £000	2016/17 Variance at year end £000
Overspend within Regulatory Services	630	78	172	(34)
Underspend within Parking & CCTV Services	(11,587)	(1,633)	(1,849)	1,442
Underspend within Safer Merton	477	(48)	(34)	(118)
Total for Public Protection	**(10,480)**	**(1,603)**	**(1,711)**	**1,290**
Overspend within Waste Services	13,975	98	327	168
Underspend within Leisure & Culture	867	(166)	(127)	(72)
Overspend within Greenspaces	1,350	754	552	206
Underspend within Transport Services	(893)	(53)	88	342
Total for Public Space	**15,299**	**633**	**840**	**510**
Overspend within Senior Management & Support	1,004	3	1	(44)
Total for Senior Management	**1,004**	**3**	**1**	**(44)**
Underspend within Property Management	(2,538)	(422)	(272)	(564)
Overspend within Building & Development Control	(400)	397	370	(157)
Underspend within Future Merton	9,959	(219)	(40)	(158)
Total for Sustainable Communities	**7,021**	**(244)**	**58**	**(789)**
Total Excluding Overheads	**12,844**	**(1,211)**	**(812)**	**1,011**

Overview

The department has a year-end direct underspend of £1,211k at year end. The main areas of variance are Parking Services, Greenspaces, Property Management, Building & Development Control, and Future Merton.

Public Protection

Parking & CCTV Services underspend of £1,633k
The underspend is mainly as a result of the protracted timeframe for the implementation of the ANPR system across the borough. The section did not have a fully functional system until February 2017, but the necessary upgrades and camera performance reviews conducted by the contractor and officers from the team have now been completed. The positive effects of this fully functional system e.g. improved traffic flow, is expected to be realised during 2018/19. The later start of the ANPR enforcement has resulted in a delay in motorist compliance with traffic regulations and the revenue generated reflecting this.

Included within the outturn is an employee related overspend of c£345k due to a combination of savings not yet implemented and increased demand. Due to the implementation of the diesel surcharge and the delay in fully implementing ANPR the section has been forced to delay implementing certain savings, whilst needing to recruit additional agency staff to manage PCN and permit demands. This pressure was offset by an over-recovery in permit revenue (£252k).

Public Space

Greenspaces overspend of £754k
Although significant savings have been realised, the section overspent on the contract for parks and greenspaces work with idVerde by approximately £346k. This included £193k of one-off redundancy costs to LBM as agreed as part of the procurement process. The contract commenced in February 2017 and is for a period of 8 years (with the option to extend).

In addition, works to trees overspent by c£161k as a result of work required on the borough's trees in order to avoid accidents or damage. From October 2018, this work is expected to be carried out by IDVerde and will benefit from the lower rates available through the Phase C arrangements.

The section also underachieved on its income expectations in the following areas. Firstly, on events related income (£48k), whereby related savings of £170k have been implemented in the last two years, and whilst one event boosted the income, work continues to identify how income from events in parks, including developing working partnerships with external event production companies, can be generated. Secondly, due to a delay in the implementation of 2016/17 saving E&R26 (£60k) i.e. P&D within certain parks, and the decision to limit the charging to fewer parks, this income has not commenced until the beginning of the 2018/19 financial year, and will not deliver the full savings requirement.

Other areas of overspend included utility costs (£48k), and rental income (£50k).

Waste services overspend of £98k

A significant reduction between December and outturn was seen within Waste Services, notably £170k on disposal costs, as the section continued to see a reduction in waste tonnages coupled with higher than expected rebates from recyclates (based on a basket price), when compared to

2016/17. The overspend on the Phase C contract also reduced by c£90k during the same period, ending the year with an overspend of around £550k.

Sustainable Communities

Building & Development Control overspend of £397k
The section ended the financial year with an underachievement on income of £557k – of which £474k occurred within Building Control and £83k within Development Control. This reflects the reduction in the Authority's market share in recent years although 2017/8 saw a slight upturn in market share. This downward trend has also impacted on the section's ability to meet some of its associated 2017/18 savings, notably ENV20, D&BC1, D&BC2, D&BC3, D&BC5, and D&BC6 i.e. Increased income from building control services, fast tracking of householder applications, commercialisation of the service, and removal of the Planning Duty service. Replacement savings have been agreed by Cabinet that will help mitigate this pressure from 2018/19.

This includes a reduction, when compared to 2016/17, in development control income of around £396k due to a downturn of around 10% in planning applications and fewer planning performance agreements being secured during the year. This only results in an underachievement against budget of £83k, but is a considerable decrease in income levels.

Property Management underspend of £422k
The main reason for the underspend is as a result of exceeding their commercial rental income expectations by £593k mainly due to conducting the back log of rent reviews in line with the tenancy agreements. This overachievement of income was partially offset by an overspend within Employees (£29k), premises related expenditure (£88k), and supplies & services (£67k).

Future Merton underspend of £219k
The main reason for the underspend is the delay in utilising the Morden and Wimbledon growth items of £283k provided in 2017/18. With regard to the Morden Town Centre project, external funding has been utilised to fund the work on Morden in 2017-18. Spend to date has been lower than anticipated due to the time taken to form and agree the legal relationship with TfL and there was a delay of a few months in proceeding with the appointment of the development consultants, GVA so we are now able to progress effectively. This company were appointed by TfL in March 2018 (originally this work was expected to start in late 2017). All costs, including GVA work and legal costs, are being jointly funded by LBM and TfL and we will start to see the majority of the spend throughout 2018 and into 2019.

With regard to the FutureWimbledon project, due to Crossrail 2 being at least a year behind the original schedule, the work on the Masterplan has been held back until 2018-19. The Masterplan is due to be published for consultation after the local elections.

Other notably underspends occurred on general supplies & services (£60k), and street works & permitting schemes (£61k). The underspend within supplies and services was mainly against consultants, primarily due to £32k of costs being charged to the Housing Company Merantun, and lower than anticipated costs for the consultant working for the Planning Inspector on the Estates Local Plan.

These underspends were partially offset by overspends in relation to consulting and implementing new CPZ across the borough (£121k) that, when implemented, generate permit income for Parking Services, and street lighting energy costs (£78k).

Children Schools and Families

Children, Schools and Families	2017/18 Current Budget (£000)	2017/18 Outturn (£000)	Variance (£000)	Forecast variance at year-end-December (£000)	2016/17 Outturn Variance (£000)
Education	17,259	16,556	(703)	(468)	(874)
Social Care and Youth Inclusion	20,729	24,325	3,596	3,057	3,259
Cross Department budgets	1,639	1,544	(95)	(78)	(271)
PFI	7,916	7,574	(342)	(223)	(549)
Redundancy costs	2,083	1,876	(207)	(155)	(411)
Total (controllable)	**49,626**	**51,875**	**2,249**	**2,133**	**1,154**

Overview

At the end of March Children Schools and Families overspent by £2.249m on local authority funded services. Although the department received £1m growth which was allocated against placement budgets, there were pressures in excess of the growth allocated to the department.

In 2017/18 the department has again identified underspends to offset cost pressures that are not sustainable on an on-going basis or one-off windfalls which is not guaranteed to reoccur in future years. This means that the demographic and new burdens cost pressures will continue into the new financial year. Plans are in place to allocate the majority of the £500k demographic growth to staffing in 2018/19 which is expected to eliminate the agency staff cost pressure experienced detailed below.

The current year forecast overspend includes the cost for agency staff (£480k) which was funded from the Corporate Contingency for the last three years to enable the department to maintain safe caseloads, and review practice as part of our agreed approach and service model, ahead of the Ofsted inspection.

Due to the volatile nature of placement and SEN transport budgets and the current volume of CSC activity and EHCP requests we are exercising appropriate demand management balancing our education and social care statutory duties with careful and considered oversight of spend.

Local Authority Funded Services

Significant cost pressures and underspends identified to date are detailed in the table below:

Description	Budget £000	Mar £000	Dec £000	2016/17 £000
Procurement & School organisation	592	(319)	(334)	(448)
Premises and contracts team	533	(95)	(66)	(105)
SEN transport	4,131	566	567	394
Early achievement of savings	200	(200)	(200)	0
SEN statement support team	394	(78)	(82)	(7)
My futures team	517	(212)	(109)	(35)
Staffing underspends across Early Years services	1,477	(114)	(147)	(333)

Other small over and underspends	9,415	(251)	(97)	(340)
Subtotal Education	**17,259**	**(703)**	**(468)**	**(874)**
Fostering and residential placements (ART)	5,226	813	443	611
Supported lodgings/housing	1,645	156	154	1,110
Un-accompanied asylum seeking children (UASC)	628	693	767	579
Community Placement	0	750	500	0
No Recourse to Public Funds (NRPF)	21	353	345	484
Social Work staffing	4,714	631	595	282
Family and Adolescent Services	43	31	31	0
MOSAIC implementation support	0	85	86	0
Other small over and underspends	8,477	84	136	288
Subtotal Children's Social Care and Youth Inclusion	**20,729**	**3,596**	**3,057**	**3,259**

Education Division

Procurement and school organisation budgets underspent by £319k as a result of lower spend on revenuisation budgets. This budget relates to construction projects that cannot be classified as capital. The majority of this is required for temporary classrooms due to rising pupil demand when it is not viable to provide permanent buildings. No temporary classrooms are required for 2018/19 following confirmation that Harris Wimbledon will open as planned in September 2018 which should mean that the underspend would continue.

The premises and contract team budget underspent by £95k. This was mainly due to delayed recruitment to vacancies as well as overachieving income and reducing spend on some supplies and services budgets.

The SEN transport budget overspent by £566k at the end of the financial year. A full review of the routes purchased from taxi providers was conducted prior to the summer procurement programme. Savings made through this exercised reduced the overall cost of taxi transport, but the this was not sufficient to cover the increase in numbers of cases experienced during the year. The caseload increase from 216 in September 2016 to 261 in March 2018 (a 21% increase). Due to the high volume of increases, this budget overspend is expected to increase during 2018/19.

Education savings was brought forward by a year which resulted in a one-off in-year underspend of £200k.

The SEN support team underspent by £78k on staffing due to difficulties in recruiting appropriate staff to vacancies. Recruitment continues to ensure we can meet our statutory duties in relation to EHCP timeliness.

The My Futures team underspent by £212k due to vacancies held during the year while team was restructured.

As part of management action, where possible, recruitment to vacancies in some early years service areas were delayed with the aim to reduce the overall in-year departmental overspend. This resulted in an overall underspend of £114k.
There were various other small over and underspends across the division netting to a £251k underspend. These combine with the items described above to arrive at the total reported divisional underspend of £703k.

Children's Social Care and Youth Inclusion Division

While the numbers of Looked after Children (LAC) remain relatively stable, and indeed Merton maintains relatively low levels of children in care, the complexity of a significant proportion of cases is causing cost pressures as detailed below. Placement costs are reviewed on a monthly basis to ensure that projections of spend are as accurate as possible.

Service	2017/18 Current Budget £000	2017/18 outturn £000	Variance		Placements	
			Mar £000	Dec £000	Mar Nr	Dec Nr
Residential Placements	2,239	2,512	273	63	11	11
Independent Agency Fostering	1,789	1,914	125	96	44	45
In-house Fostering	964	1,291	327	201	63	57
Secure accommodation	134	4	(130)	(130)	0	0
Mother and baby	100	318	218	213	0	2
Total	**5,226**	**6,039**	**813**	**443**	**118**	**115**

The ART service seeks to make placements with in-house foster carers wherever possible and in line with presenting needs, however, the needs of some looked after children mean that placements with residential care providers or independent fostering agencies are sometimes required. Some specific provision is also mandated by the courts.

- The residential placement expenditure overspent by £273k. The overall cost is £8k less this year compared to last year due to a detailed review of these placements which aimed to reduce overall residential placement cost.
- The agency fostering placement expenditure overspent by £125k. The overall cost has increased by £189k since last year due to the number of and specific circumstances of cases (increase of 3 cases).
- The in-house foster carer expenditure overspent by £327k. The overall cost has increased by £130k since last year due to the overall caseload increase of 17.
- We had one young person in secure accommodation for a few days who has now left.
- Mother and Baby placement budgets overspent by £318k. The overall cost is £73k higher than last year and is difficult to manage and predict due to the nature of the placements requiring extensions of placements and additional support.

The budget for semi-independent and supported lodgings/housing placements overspent by £156k. These are for young people who require semi-independent provision through to independence or, in some cases, through to the age of 21 (older in exceptional circumstances), as part of our statutory duties. There were 61 semi-independent placements for young people at the end of March 2018 up to an age of 25.

The UASC placements overspent by £693k this year.

Service	2017/18 Current Budget £000	2017/18 outturn £000	Variance		Placements	
			Mar £000	Dec £000	Mar Nr	Dec Nr
Independent Agency Fostering	369	192	(177)	(180)	9	7
In-house Fostering	0	350	350	407	21	18
Supported lodgings/housing	259	779	520	540	27	29
Total	**628**	**1,321**	**693**	**767**	**57**	**54**

At the end of March we had 57 UASC placements with a number of young people aged 18+ with no recourse to public funds in semi-independent accommodation. We are experiencing a sustained rise in UASC referrals and expect to reach the 0.07% rate (34 children, currently 20) in the next 6-12 months. This is likely to lead to a net increase in UASC expenditure.

There was a £750k overspend on a community placement. This provision relates to a complex case currently under discussion between the CCG and the local authority. The overspend relate to nursing care which has been claimed for by the CCG at a much higher cost than originally expected but less than originally charged. The cost for 2018/19 is still being negotiated and there is a risk that this pressure will continue.

The NRPF budget overspent by £353k in the current financial year. The NRPF worker is working closely with housing colleagues to manage cases as they arise and is also reviewing historic cases to identify ones where claimant circumstances has changed and can therefore be stepped down from services. We continue to use the Connect system to progress cases and continue to review open cases with the aim to limit the cost pressure on the council. The AD continues to forensically scrutinise activity in this area. Strong gate keeping has resulted in a reduction of overall numbers from a peak of about 30 to an estimated case load of 15 at the end of this financial year which should impact positively on next year's overspend.

The Central Social Work, MASH, First Response, CASA, Bond Road and CWD team's staffing costs overspent by £631k. The majority of this is due to additional social work capacity required to manage safe caseloads and review of practices, previously funded by the council's contingency, and are kept under regular review as they are covered by agency. On top of the additional staff, the teams also has to cover vacancies with agency staff due to difficulty in recruiting permanent members of staff. The situation is progressing and work is taking place to improve retention.

The Family and Adolescent Services staffing budget overspent by £31k. This is due to the head of service post which had been deleted as part of the 2017/18 savings continuing to be covered by an agency member of staff due to short term service requirements. These arrangements ceased in September.

Following the implementation of MOSAIC, some changes and service support is still required which is now funded from the departmental budgets rather than from the project. The support was required until the end of December at a cost of £85k.

There are various other small over and underspends across the division netting to a £84k overspend. These combine with the items described above to arrive at the total reported divisional overspend of £3,596k.

Dedicated Schools Grant

DSG funded services overspent by £1.896m. These budgets are not within the council's general fund and cannot be offset against the local authority funded budgets. The overspend will be funded from the DSG reserve and applied after consultation with Schools Forum. Variances between individual nominals have been shown in the overall departmental analyses.

The pressure on the high needs block will continue in 2018/19. Due to the low level of DSG reserves, it is expected that this will go into a negative position at the end of next financial year, joining some other London LAs.

The main reasons for the variance relates to the overspend of £1.319m on Independent Day School provision, £364k on EHCP allocations to maintained primary and secondary schools and £508k on additional school business rate adjustments primarily due to the revaluation of properties in the beginning of 2017. This was offset by a £356k underspend on Further Education colleges and Independent School Provision

There are various other smaller over and underspends forecast across the DSG netting to a £63k overspend which, combined with the items above, equates to the net overspend of £1.898m.

We continue to keep abreast of proposed changes to the National Funding Formula, especially in relation to risks associated with services currently funded by de-delegated elements of the DSG.

Management Action

<u>New burdens</u>
There are a number of duties placed on the Local Authority which have not been fully funded or not funded at all through additional burdens funding from Central Government. £1m growth was added by the council in 2017/18 to the supported housing/lodgings budget. Excluding the cost of these duties would leave a net departmental overspend of £1.047m, however that figure masks substantial once off windfalls and non-recurrent and recurrent management action. The table below highlights the continued estimated overspends relating to these unfunded duties:

Description	Budget £000	Mar overspend £000	Dec overspend forecast £000
Supported lodgings/housing	1,645	156	154
Un-accompanied asylum seeking children (UASC)	626	693	767
No Recourse to Public Funds (NRPF)	21	353	345
Total	**2,292**	**1,202**	**1,266**

Following changes introduced through the Children & Social Work Act, local authorities will take on new responsibilities in relation to children in care and care leavers. Local authorities will be required to offer support from a Personal Adviser to all care leavers to age 25. New burdens funding will be provided to support implementation of this change.

Further new burdens are expected for 2018/19 including:

- Social Care Act requirement for new assessment process for all social workers
- SEND tribunals will cover elements of children care packages and therefore cost
- New requirement of social work visits to children in residential schools and other provision.

Staffing

Agency cost continues to be a cost pressure for the department as permanent social worker recruitment continues to be challenging. We are operating, however at our lowest level of agency staff in 3 years. The continued recruitment drive including recruitment of NQSWs, temporary to permanent initiatives and retention payments will all have a positive impact on the current financial year and we will continue to take action to bring down anticipated overspends on agency/staffing costs.

Placements

Our strong management oversight enables us to ensure that an appropriate entry to care threshold is well-maintained. The impact of increased numbers of UASC is in particular affecting our LAC and care leaver numbers and we remain in the lowest rate of care range in London.

Work continues to ensure we lever in appropriate health contribution to children with complex needs and our ART service is driving down placement costs including through regional partnership commissioning.

Our ART Fostering Recruitment and Assessment team is continuing to recruit new foster carers who will offer locally based placements with an enhanced recruitment campaign, targeting carers for teenagers, sibling groups and UASC. 11 were recruited during the past year. This continues to reduce the increase in more expensive agency foster placements, but there is a time lag. Our ART Placement and Fostering teams are continuing to work to ensure the maximum use of our in house fostering provision.

Our ART Placement service is working with providers to establish more local provision and offer better value placements to the Council. There is now an established agreed cost framework for semi- independent providers and this has resulted in more appropriately priced placements for Care Leavers and older LAC. Our ART Placement team are working with the 14+ team to review placements in and ensure appropriate use of the semi-independent market.

We have contracted with a provider to block purchase five independent units for care leavers aged 18+. This will act as a step down into permanent independent living. For the total 5 placements in the provision, this cost is £1,400 per week. This is a significantly better financial value than using the semi-independent market for our care leavers. We have five young people currently there. Many of these young people will also be eligible to claim Housing Benefit.

We have updated our Staying Put policy for young people aged 18+ to enable them to remain with their foster carers as recommended following our Ofsted inspection. We currently have 9 young people remaining with in house foster carers. Financially this is a more cost effective offer than semi-independent provision. However, the increased use of Staying Put for young people aged 18+ impacts on available placements for younger teenagers and therefore there is a likelihood of an increase in the use further IFA placements in the near future. We continue to focus our foster carer recruitment on carers for teenagers to mitigate these potential additional costs.

All residential placements are regularly reviewed through a monthly panel process. The fostering recruitment strategy is being refreshed in light of the new Staying Put requirement.

General
The department continues to scrutinise all budgets to see how we can offset the above costs pressures and others created by growing demographics and new burdens. Where possible we use grant and income flexibly to reduce our cost pressure.

Community and Housing

Overview

Community and Housing has consistently forecast an overspend of between £1m to £1.2m throughout the financial year. C&H DMT identified actions in year to bring this down. The final outturn as at March 2018 is £922k of which £425k is related to one off costs during 2017.18. Close monitoring and management of this service continues into 2018/19.

The main pressures are on Adult Social Care placements and in the costs of temporary accommodation. A senior level focus on placements has stabilised spend and it has started to reduce in the last six months. Merton has one of the lowest usages of temporary accommodation, but there were increased costs early in the New Year with the very poor weather.

C&H Summary Outturn Position

Community and Housing	2017/18 Current Budget £'000	2017/18 Outturn £'000	2017/18 Variance £'000	Forecasted Variance (Dec'17) £'000	2016/17 Outturn Variance £'000
Access and Assessment	47,148	47,603	455	1,014	9,432
Commissioning	3,649	3,860	211	(8)	67
Direct Provision	4,286	4,091	(195)	(216)	(169)
Directorate	770	951	181	119	(274)
Adult Social Care	**55,853**	**56,505**	**652**	**909**	**9,056**
Libraries and Heritage	2,033	2,053	20	13	(88)
Merton Adult Education	0	0	0	0	501
Merton Adult Education- Commissioning Model	4	(2)	(6)	(6)	0
Housing General Fund	1,937	2,193	256	165	655
Sub-total	**59,827**	**60,749**	**922**	**1,081**	**10,124**
Public Health	**0**	**0**	**0**	**0**	**16**
Grand Total	**59,827**	**60,749**	**922**	**1,168**	**10,140**

Adult Social Care

There has been a renewed effort to effectively monitor and manage Adult Social Care budgets during 2017/18 by holding weekly budget management meetings and the implementation of a management action plan which will continue into 2018/19.

Adult Social Care received £9.3m growth in 2017/18 to support identifiable pressures in the placements budget this has been substantiated by the outturn variance achieved by the department.

There has been a noticeable reduction in committed expenditure on placements in the latter part of the financial year which is due to the introduction of the outcomes forum, weekly monitoring of variations and the increase scrutiny of care packages.

Throughout 2017/18 we reported on the Better Care Fund agreement with Merton CCG and the Borough and the potential liability of a £474k risk share contribution, in addition to the £275k pressure from the previous year. Due to the continued effective working relationship with Merton CCG the Community & Housing management team has negotiations a reduction in the expected risk share allocation to £150k.

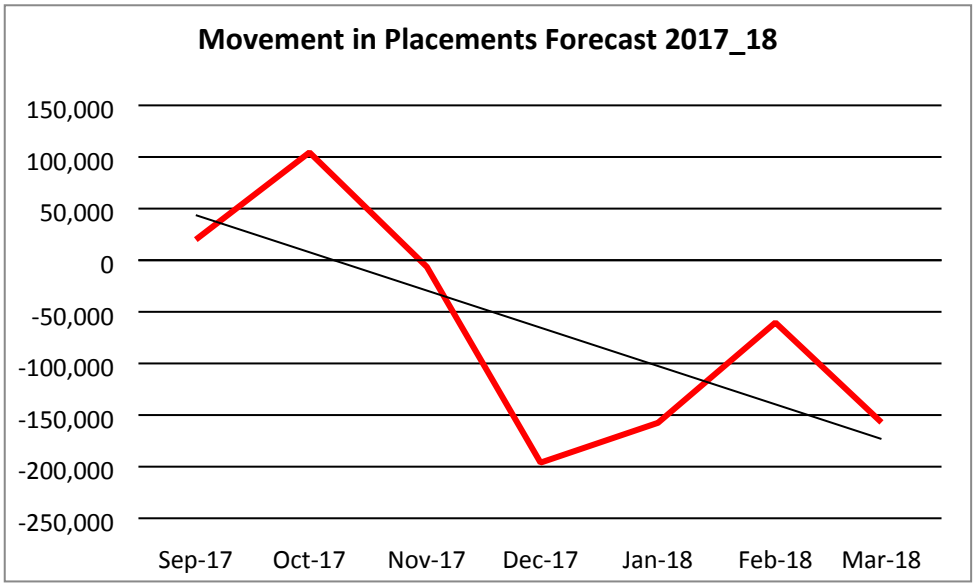
Access & Assessment

Access and Assessment outturn adverse variance was £455k. This is better than expected due to effective management of the service, outcomes forum and close monitoring of the service.

This area is the most volatile within the Community and Housing service. It is a demand led service which is affected by changes legislation, market forces and the demand of an aging population.

Expenditure on placements continues to decline during 2017.18 as demonstrated by graph 1 below. The outcomes forum has been an effective tool in improving practice in assessment and support planning.

Graph1



Considerable effort has been put in to improving data quality, which has led to improved understanding of the pressure points, increased ability to target actions and increased consistency of reporting and forecasting. Placements spend is now tracked monthly and movements identified at the level of individual packages of care. These changes and trends are monitored by the Directorate Management Team and the Cabinet member for adult social care.

Access & Assessment	Outturn Variances (Mar'18) £00	Forecast Variances (Dec'17) £000
Underspend on Concessionary Fares	(100)	(92)
Overspend on Better Care Fund Risk Share for 2016/17 & 17/18	425	275
Other	(307)	(139)
Placements	1,671	2,354
Income	(1,234)	(1,384)

Total	**455**	**1,014**

Commissioning

Commissioning service outturn adverse variance was £211k, which includes supporting people contracts which was previously reported under placements. Pressures include additional staff costs to improve income collection.

Direct Provision

This service outturn variance is £195k under spend due to careful management of staff costs. There is pressure in one of the residential services which is being addressed. Day services staff work across all sites to ensure cover.This year there were delays with recruitment which resulted in an underspend. Use of bank staff across services has helped control costs.
The grants received for Mascot (BCF, DFG) have been utilised and we will use more in the coming year to alleviate staffing pressures in the service.

Directorate

This area was forecasting an overspend throughout the financial year which was mainly due to salary cost of two directors, temporary head of services and other project workers engaged to undertake home care procurement.

C&H-Other Services

Libraries-

In December this service forecasted an over spend of £13.7k which increased to £19.5k as at March 2018. The service was forecasting an over spend of £43k on staffing related expenditure but at year end overspend was reduced to £33k which was due to the restructure of the service and the continued use of agency staff during the transition process. Alternatively income was less than forecasted in December by £6.7k excluding project income. There is also the issue of a negative leasing budget that will be resolved in 2018/19.

Merton Adult Learning –

This service outturn variance is £6k under spend. Merton Adult Learning forecasted an under spend since September 2017.

The £6k underspend is due to fees collected by the service for the in-house Learning Difficulties and Disabilities provision provided.

Housing

Outturn Variance is £256k overspend

In this service the main unpredictable area is temporary accommodation. Although throughout 2017/18 cost appeared constant there was an increase between December and January. Additionally with the on-set of the impending new requirements on this

service, via the Homeless Reduction Act (HRA) the team has seen an increase of number of clients.

However, despite this being such a volatile service the service continues to prevent homelessness, thus avoiding expensive placements into temporary accommodation.

The service also continues to maximise income collection for clients living in temporary accommodation by collecting personal contributions from clients, and claiming Housing Benefit and Universal Credit. A total of £735K has been collected directly from clients in 2017/18.
The service is currently working towards implementing the HRA and will proceed with a planned restructure to meet the new legislative requirements, duties and any savings which are required.

Housing	Budget £'000	Outturn Variances (Mar'18) £'000	Forecast Variances (Dec'17) £'000
Temporary Accommodation-Expenditure	2,296	909	812
Temporary Accommodation-Client Contribution	(140)	(595)	(585)
Temporary Accommodation-Housing Benefit Income	(2,000)	(166)	(350)
Temporary Accommodation-Subsidy Shortfall	322	517	593
Temporary Accommodation- Grant	-	(406)	(406)
Total Temporary Accommodation	478	259	64
Housing Other- Over(under)spends	1,459	(3)	101
Total	**1,937**	**256**	**165**

Public Health

This service reviewed many contracts during 2017/18 in order to obtain value for money.
Public Health achieved a breakeven position as predicted.

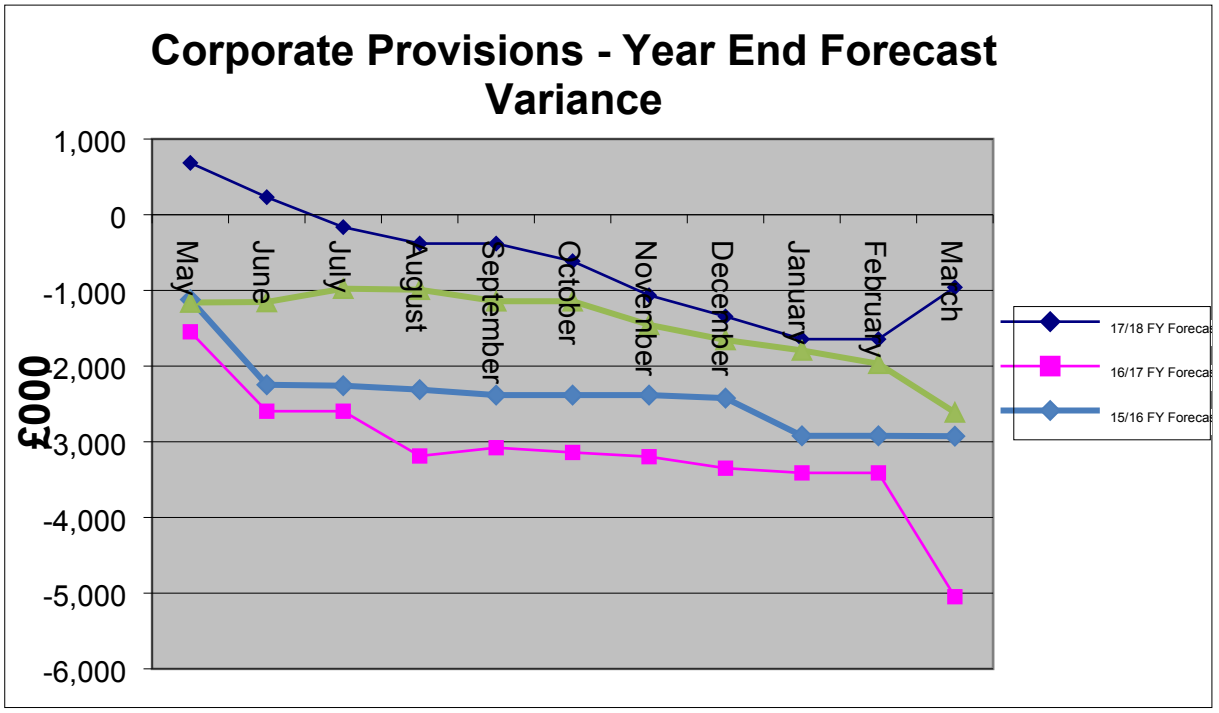
Summary

The department establishment a weekly meeting to plan management actions during 2016/17 and these continued into 2017/18 to closely monitor placement budgets.

Section 4 Corporate Items

1. These budgets cover a wide range of significant areas including treasury management, contingency, contributions to past service deficiency on the pensions fund and contributions from government grants and use of reserves. The details comparing actual expenditure with budget are contained in Appendices 1 and 2. The summary position is as follows:-

Corporate Items	Current Budget 2017/18 £000s	Full Year Outturn (Mar.) £000s	Outturn Variance at year end (Mar.) £000s	Forecast Variance at year end (Dec.) £000s	2016/17 Year end Variance £000s
Impact of Capital on revenue budget	**11,604**	**11,501**	**(103)**	**(17)**	**193**
Investment Income	(1,186)	(778)	408	402	(176)
Pension Fund	3,264	2,875	(389)	0	(498)
Pay and Price Inflation	736	0	(736)	(350)	(739)
Contingencies and provisions	4,103	1,656	(2,447)	(1,379)	(3,495)
Income Items	(1,152)	(1,256)	(104)	0	(330)
Appropriations/Transfers	2,102	4,546	2,445	0	(3,091)
Central Items	**7,867**	**7,044**	**(823)**	**(1,327)**	**(8,329)**
Levies	933	933	(0)	0	0
Depreciation and Impairment	(18,966)	(18,966)	0	0	0
TOTAL CORPORATE PROVISIONS	**1,437**	**511**	**(926)**	**(1,344)**	**(8,136)**



2. From an early stage in the financial year, it became clear that there would be severe pressures on service department budgets, particularly in demand led services such as Adult Social Care. It was therefore necessary to monitor corporate provisions carefully throughout 2017/18 in order to offset the forecast overspend as far as possible by underspends in corporate budgets, mainly in contingencies held to provide flexibility in the event of such pressures.

3. Impact of Capital on Revenue Budget
Throughout 2017/18 a small underspend on the cost of borrowing had been forecast and the outturn has resulted in a slightly larger underspend arising from decisions made in how the capital programme has been funded.

4. Investment Income
A deficit in achievement of investment income has been forecast throughout 2017/18 and the final outturn was in line with this expectation.

5. Pension Fund
There was an underspend of £0.389m at year end arising mainly from the non-utilisation of the budget for autoenrolment. These costs were met within service departments employees budgets.

6. Pay and Price Inflation
The provision for inflation includes an element for price increases exceeding 1.5% and throughout 2017/18 use of this budget was resisted to offset the forecast overspend in service departments. This resulted in an underspend of £0.436m. The £0.300m provision for Utilities inflation was also not used in 2017/18 and held as cover against the forecast overspend in services.

7. Contingencies and Provisions
This budget contains budgets for the provision of bad debts, loss of income arising from the P3/P4 site development, direct revenue funding of capital, provision for revenuisation, Single Status/Equal Pay and general contingency.

The net underspend of £2.474m consists of the following main variations:-

a) Contingency – Underspend £1.500m: The contingency was held throughout the year as cover for anticipated pressures in service expenditure.

b) P3/P4 - Underspend £0.4m: The underspend is due to the delay in commencing with the proposed development which means that car parking income has continued on the site. This was forecast throughout the year.
c) Single Status/Equal Pay – Underspend £96k
d) Provision for Loss of HB Admin. Grant – There was only a small demand of £21k against this budget in 2017/18 leading to an underspend of £0.179m.
e) Bad Debt Provision – Overspend £0.395m: There was an unexpected increase in demand against the provision for bad debts and further work will be carried out in 2018/19 to improve the forecasting and monitoring of this budget.

f) Apprenticeship Levy: Underspend £0.235m: This was the first year of operating the apprenticeship levy.
g) Revenuisation and Miscellaneous – Underspend £0.459m. It was originally anticipated that this budget would be used to fund capital projects but in light of pressures on service expenditure it was subsequently decided to use the revenue reserve for capital purposes and retain the flexibility that revenue resources provide. The underspend was held to offset against the forecast overspend.

8. Income Items: Underspend £0.104m
The underspend is due to slightly increased income (£48k) from CHAS IP/dividend and some other small miscellaneous un-budgeted income .

9. Appropriations/Transfers: Overspend £2.44m
The £2.4m variation reflects the decision not to implement the budgeted transfer of £2.4m from the Balancing the Budget Reserve following the improved financial position on forecast outturn

10. Funding
The level of funding from central government was £0.488m better than budgeted. This is due to a net underspend of £0.488m arising from Business Rates/Section 31 Grant. This mainly relates to changes to small business rates relief announced in the Government's Spring 2017 Budget and in the Government's technical consultation papers issued in December 2017outlining changes to 2017/18 Small Business Rates Relief Threshold payments.

Section 5 - Other Information

E5- Financial system

A considerable amount of work has been undertaken in reconciling our old legacy systems to the new E5 Financial system as part of our preparations for closedown. After extensive analysis of our Accounts Payable and Receivable ledgers we are currently left with a net credit balance to write off totalling £617k. We will continue with our efforts to reconcile this amount during our closedown period. We will also review the treatment of this balance with our external auditors but it could result in an additional underspend on our accounts.

Debt Report
The report on debt at year end is provided in Appendix 4

Section 6 Reserves Position

USABLE RESERVES

Usable Reserves	Balance at 31 March 2017 £000	Transfers out 2017/18 £000	Transfers in 2017/18 £000	Balance at 31 March 2018 £000
General Fund:				
Balances held by schools	(8,246)	426	0	(7,820)
General Fund Balances	(12,778)	0	0	(12,778)
Earmarked reserves	(41,105)	3,182	(2,200)	(40,123)
Total General Fund	**(62,129)**	**3,608**	**(2,200)**	**(60,721)**
Capital:				
Capital Receipts Reserves	(22,986)	12,001	(4,527)	(15,512)
Capital Grants Unapplied	(7,251)	185	(3,413)**	(10,479)
Total Capital	**(30,237)**	**12,186**	**(7,940)**	**(25,991)**
Total Usable Reserves	**(92,366)**	**15,794**	**(10,140)**	**(86,712)**

**Reflects 18/19 grants received in advance

General Fund Balance - This fund includes any surplus after meeting net expenditure on Council services.

Earmarked Reserves - Earmarked reserves are amounts set aside from the General Fund to provide financing for future expenditure plans. Also included in this note are amounts held by schools under delegated schemes and amounts set aside to meet future insurance claims.

Capital Receipts Reserve - This represents receipts from the sale of land and other assets. The reserve can be used for the repayment of external loans, or transferred to the capital adjustment account to finance capital expenditure.

Capital Grants Unapplied - These are unapplied capital grants set aside for future capital expenditure. The balance includes unapplied Community Infrastructure Levy receipts.

Transfers to/from Earmarked Reserves

Reserve	Balance at 31st March 2017 £000	Net Transfer (to)/from Reserve £000	Balance at 31st March 2018 £000
Outstanding Council Programme Board	(4,919)	375	(4,545)
For use in future years' budgets	(7,789)	(2,473)	(10,261)
Revenue Reserve for Capital/Revenuisation	(6,815)	3,317	(3,498)
Renewable energy reserve	(1,523)	0	(1,522)
Repairs and renewals fund	(1,147)	57	(1,090)
Pension fund additional contribution	(497)	44	(453)
Local land charges	(1,903)	(134)	(2,038)
Apprenticeships	(302)	42	(260)
Community care reserve	(1,386)	0	(1,386)
Local welfare support reserve	(443)	66	(376)
Economic development strategy	(101)	99	(2)
Corporate services reserves	(776)	(995)	(1,770)
Wimbledon tennis courts renewal	(127)	(25)	(150)
Governor support reserve	(42)	14	(28)
Redundancy costs reserve	(600)	600	0
BRS Reserve	(870)	0	(870)
New homes bonus scheme	(291)	169	(122)
Adult social care contributions	0	(2,161)	(2,161)
Culture & environment contributions	(14)	0	(14)
Culture & environment grants	(250)	(267)	(517)
Children & education grants	(306)	(119)	(425)
Supporting people balances	0	0	0
Housing planning development grants	0	0	0
Housing GF grants	(106)	0	(106)
Public health grant reserve	(347)	347	0
Insurance reserves	(1,955)	0	(1,955)
DSG reserve	(3,664)	2,736	(928)
Refund of school PFI contributions	(100)	100	0
School standard Fund	(6)	(366)	(372)
Schools PFI fund	(4,827)	(421)	(5,248)
CFS Reserves	0	(25)	(25)
Grand Total	**(41,105)**	**980**	**(40,123)**

Section 7 CAPITAL

Outturn and Budget Management

The table (a) below shows that Total Capital Expenditure for 2017/18 is £32.2 million compared to the total projected by budget managers in November 2017 of £39.4 million (this equates to a negative variance of 18.2%). November is used for capital variances due to the funding decisions taken at this time of the capital programme. This variance is higher than last year and is mainly caused by the Customer Contact, Housing Company and Acquisitions Budgets within Corporate Services.

Table (a) - Capital Outturn Position 2017/18

Department Column	Revised Capital programme (approved November 2017) (1)	Final Outturn (2)	Outturn Variance to Budget (3)	November Forecast For Year (4)	November Forecast Variance to Outturn (5)	% Variance to November Forecast (6)
			(2)-(1)		(2)-(4)	(5)/(4)
Corporate Services	13,432,250	8,243,541	(5,188,709)	13,741,644	(5,498,103)	(40.01)
Community and Housing	1,301,020	1,110,766	(190,254)	1,238,530	(127,764)	(10.32)
Children, Schools & Families	6,959,650	6,035,776	(923,874)	6,890,292	(854,516)	(12.40)
Environment & Regeneration	17,638,020	16,839,927	(798,093)	16,874,716	(34,790)	(0.21)
Total	**39,330,940**	**32,230,009**	**(7,100,931)**	**38,745,182**	**(6,515,173)**	**(16.82)**
Leasing/School Capital Loan	676,060	0	(676,060)	675,912	(675,912)	(100.00)
Total	**40,007,000**	**32,230,009**	**(7,776,991)**	**39,421,095**	**(7,191,085)**	**(18.24)**

Appendix 3a provides additional information on the individual variances on schemes.

Movement in the 2017/18 Original Approved Programme

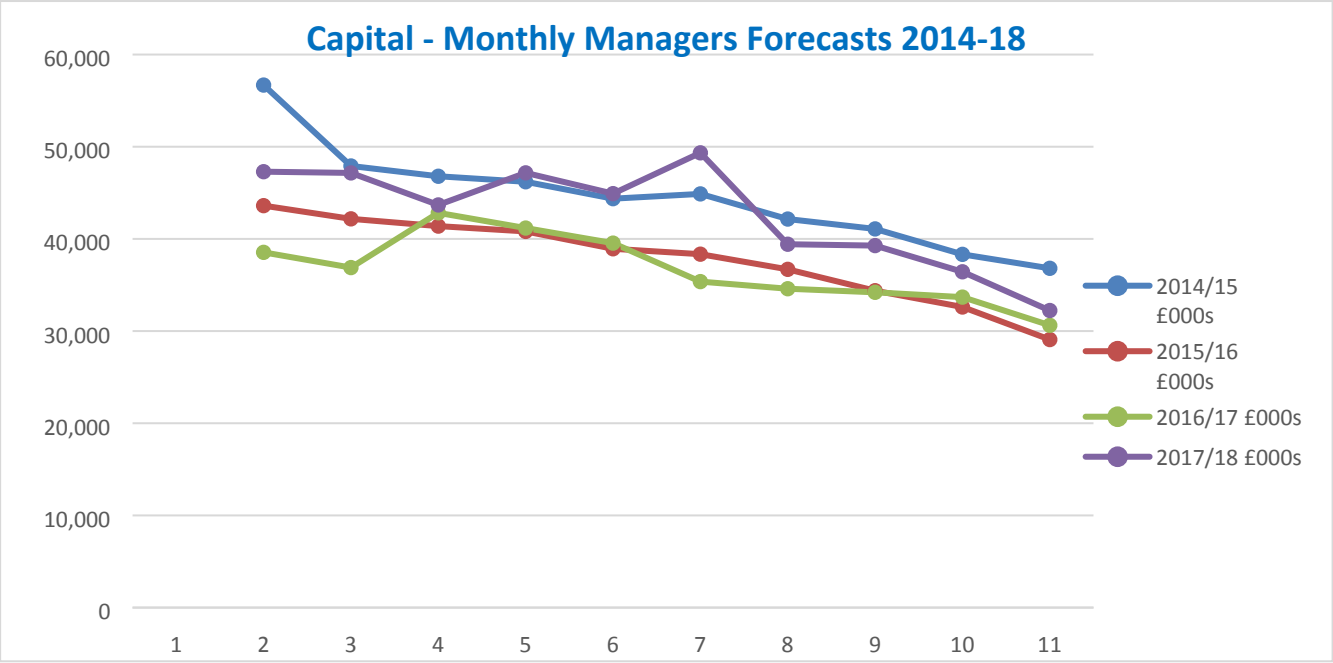
The Capital Programme for 2017/18 as approved in March 2016 was £39.5 million. Subsequently, slippage from 2016/17 of £7.5 million was added, and new funding of £16.8 million giving an effective opening programme of £63.8 million. However, during the financial year there was a net reduction in the overall programme mainly from budget being re-profiled into subsequent financial years. These movements are shown in Table (b)below. When final capital outturn is compared to the original capital programme the total slippage is 37%.

Table (b) – Movement in the Capital Programme since Approval March 2017 (£000's)

Depts.	Original Budget 17/18	Net Slippage 2016/17	Adjustments	New External Funding	New Internal Funding	Re-profiling	Revised Budget 17/18
Corporate Services	6,821	4,866	13,598	48	77	(11,942)	**13,468**
Community & Housing	1,335	235	501	75	0	(344)	**1,802**
Children Schools & Families	12,920	1,035	30	512	0	(7,437)	**7,060**
Environment and Regeneration	18,466	1,386	77	1,305	539	(4,096)	**17,677**
Total	**39,542**	**7,522**	**14,206**	**1,940**	**616**	**(23,819)**	**40,007**

Capital - Monthly Managers Forecast Spend to Outturn

The graph below shows the monthly forecasting by managers of the outturn spend on capital over the last 4 years. The forecasting trend during 2017/18 followed the pattern of previous years and there was a continuing problem with the quality of forecasting around November when the Medium Term Financial Strategy is being prepared. The overestimate in spending feeds through into an overestimate of the budget for capital charges in the following year. It should be noted that centrally finance officers adjust the total projected capital spend from departments downwards for optimism bias when funding the programme. This year the outturn estimate was reduced to £31.6 million.



Considerable time was spent with budget managers profiling their budgets in 2017-18 and this has improved the accuracy of forecasting non-corporate items at year end. This work will continue in 2018-19.

The Level of Re-Profiling / Slippage from 2017/18

The table below summaries management proposals for treatment of slippage and overspends from the 2017/18 programme.

Table (d) – Management Proposals for under/Overspends with the 2017/18 Capital Programme

Department	Total Year End Variance 2017/18	Recommend Accept Slippage	Surrender	Funded from Reserves etc	Bring Forward from 2018/19
	£000's	£000's	£000's	£000's	£000's
Corporate Services	(5,189)	5,051	258	(121)	0
Community and Housing	(190)	165	38	(12)	0
Children, Schools & Families	(924)	953	0	0	(29)
Environment & Regeneration	(798)	1,243	0	(121)	(324)
Lesing	(676)	0	676		
Total	(7,777)	7,411	972	(254)	(353)

After offsetting minor under and overspends within the programme seven schemes require clawback of budget from 2018-19, this clawback totals £353k. The seven schemes are Rutlish (Schools capital Maintenance) £29k, Street Lighting £11k, Traffic Schemes £2k, Footway £6k, Morden Leisure Centre £186k, Leisure Centres £109k and Parks Investment £10k. This additional spend will be taken from budgets within the 2018-19 budget.

Appendix 3b provides details of the proposed slippage into 2017/18 split by departments.

Revised Capital Programme 2018-22: Appendix 3C details the proposed movements in the approved Capital Programme 2018-22 for approval, this is summarised in the two tables below:

Movement in the Approved Capital Programme 2018-19

	2018-19 Budget					
Department	Budget 2018-19	Slippage into 2018-19	Reprofiled into 2019-20	New 2018-19	Clawback	Revised Budget 2018-19
Corporate Services	23,482,360	5,050,920	(9,036,660)	0	0	19,496,620
Community and Housing	772,650	164,660	0	0	0	937,310
Children Schools & Families	15,158,000	952,510	(3,946,000)	495,000	(28,730)	12,630,780
Environment and Regeneration	21,852,890	1,243,160	(1,000,000)	1,039,250	(323,920)	22,811,380
Total	61,265,900	7,411,250	(13,982,660)	1,534,250	(352,650)	55,876,090

Movement in the Approved Capital Programme 2019-22

	2019-20 Budget				2020-21 Budget			2021-22 Budget		
	Budget 2019-20	Reprofiled from 2018-19	Reprofiled to 2020-21	Revised Budget 2019-20	Budget 2020-21	Reprofiled from 2019-20	Revised Budget 2020-21	Budget 2021-22	Reprofiled from 2020-21	Revised Budget 2021-22
Corporate Services	15,818,360	9,036,660	0	24,855,020	3,944,980	0	3,944,980	3,862,000	0	3,862,000
Community and Housing	480,000	0	0	480,000	630,000	0	630,000	280,000	0	280,000
Children Schools & Families	8,107,240	3,946,000	0	12,053,240	3,202,300	0	3,202,300	650,000	0	650,000
Environment and Regeneration	9,060,170	0	(2,000,000)	7,060,170	5,017,000	2,000,000	7,017,000	4,052,000	1,000,000	5,052,000
Total	33,465,770	12,982,660	(2,000,000)	44,448,430	12,794,280	2,000,000	14,794,280	8,844,000	1,000,000	9,844,000

The Table below provides a breakdown of the New Budgets Column detailing the source of funding for the schemes:

Total New Budgets 2018/19

Narrative	Funding				Total New Budgets 2018/19
	Merton Recources	CIL Neighbourhood	S106	TfL	
Rutlish School Synthetic Pitch	*495,000				**495,000**
CCTV Investment			39,490		**39,490**
Bus Stop Compliance				(6,500)	**(6,500)**
Accesibility Programme				180,000	**180,000**
Casualty Reduction & Schools				211,950	**211,950**
A298/A238 Strategic Corridor				41,180	**41,180**
Borough wide 20mph Limit				74,000	**74,000**
Cycling in Residential Streets				180,000	**180,000**
Commonside East/Windmill Rd			40,000		**40,000**
Safer Walking Routes/Streets				18,000	**18,000**
Tfl Principal Road Maint				92,450	**92,450**
TfL Cycle Quietways				(18,700)	**(18,700)**
Cycle access/parking				36,920	**36,920**
Beddington Lane Cycle Route			60,000	333,710	**393,710**
Figges Marsh Roundabout				64,000	**64,000**
Mitcham Town Centre		425,000		28,000	**453,000**
Unallocated TfL				(1,000,000)	**(1,000,000)**
Mitcham Cricket Green Imps		50,000			**50,000**
Wandle Project			46,000		**46,000**
B591b Shop Front Improvement		79,000			**79,000**
Abbey Rec Improvements			39,750		**39,750**
B737b Merton Park Green Walks			25,000		**25,000**
Total	**495,000**	**554,000**	**250,240**	**235,010**	**1,534,250**

*Lesee is providing this sum to be used to complete the work, agreement will contain contitions limiting when the receipt can be recognised and utilised by the Authority so initially will need to be funded by Merton.

The £60k new S106 funding for Beddington Lane Cycle Route requires Cabinet approval under the arrangements for S106 funding (Recommendation C).

It is apparent from the annual spend over the past few years that with current staffing levels officers can progress a capital programme of approximately £30 to 33 million. The original and revised budgets for 2018/19 excluding corporate items are in excess of this and are being reviewed.

8 CONSULTATION UNDERTAKEN OR PROPOSED

8.1 All relevant bodies have been consulted.

9 TIMETABLE

9.1 In accordance with current financial reporting timetables.

10. FINANCIAL, RESOURCE AND PROPERTY IMPLICATIONS

10.1 All relevant implications have been addressed in the report.

11. LEGAL AND STATUTORY IMPLICATIONS

11.1 All relevant implications have been addressed in the report.

12 HUMAN RIGHTS, EQUALITIES AND COMMUNITY COHESION IMPLICATIONS

12.1 Not applicable

13 CRIME AND DISORDER IMPLICATIONS

13.1 Not applicable

14. RISK MANAGEMENT AND HEALTH AND SAFETY IMPLICATIONS

15.1 There is a specific key strategic risk for the Business Plan, which is monitored in line with the corporate risk monitoring timetable.

16. APPENDICES – THE FOLLOWING DOCUMENTS ARE TO BE PUBLISHED WITH THIS REPORT AND FORM PART OF THE REPORT

Appendix 1 Out turn position
Appendix 2 Corporate items
Appendix 3A Capital Programme Outturn Position 2017/18
Appendix 3B Proposed Budget to be Slipped to 2018/19
Appendix 3C Current Capital Programme 2018-22 including Slippage
Appendix 4 Debt Report

17 BACKGROUND PAPERS

17.1 Budgetary Control files held in the Corporate Services department.

18. REPORT AUTHOR

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APPENDIX 1

OUTTURN	2017/18 Current Budget (Net) £000s	2017/18 Outturn (Net) £000s	2017/18 Variance (Net) £000s	2017/18 Current Budget (excl. overheads) £000s	2017/18 Outturn (excl. overheads) £000s	2017/18 Variance excl. overheads £000s	2016/17 variance excl overheads £000s
Department							
Corporate Services	9,932	8,963	(969)	25,287	24,475	(812)	(1,287)
Children, Schools and Families	54,691	57,122	2,430	49,626	51,875	2,249	1,154
Community and Housing	64,480	65,654	1,174	60,022	60,944	922	10,140
Environment & Regeneration	18,271	16,810	(1,461)	12,844	11,633	(1,211)	1,011
NET SERVICE EXPENDITURE	**147,374**	**148,549**	**1,175**	**147,779**	**148,927**	**1,148**	**11,018**
Corporate Provisions	1,437	484	(953)	1,032	106	(926)	(5,035)
TOTAL GENERAL FUND	**148,811**	**149,033**	**222**	**148,811**	**149,033**	**222**	**5,983**
Business Rates	(35,483)	(35,302)	181	(35,483)	(35,302)	181	0
Grants	(28,999)	(29,668)	(669)	(28,999)	(29,668)	(669)	(536)
Council Tax and Collection Fund	(84,329)	(84,329)	0	(84,329)	(84,329)	0	0
FUNDING	**(148,811)**	**(149,299)**	**(488)**	**(148,811)**	**(149,299)**	**(488)**	**(536)**
NET (UNDER)/ OVERSPEND	**0**	**(266)**	**(266)**	**0**	**(266)**	**(266)**	**5,447**
Transfers to Reserves	(0)	266	266	(0)	266	266	(5,447)

APPENDIX 2

3E.Corporate Items	Council 2017/18 £000s	Current Budget 2017/18 £000s	Full Year Outturn (Mar.) £000s	Forecast Variance at year end (Mar.) £000s	Forecast Variance at year end (Dec.) £000s	Outturn Variance 2016/17 £000s
Cost of Borrowing	13,415	11,604	11,501	(103)	(17)	193
Impact of Capital on revenue budget	**13,415**	**11,604**	**11,501**	**(103)**	**(17)**	**193**
Investment Income	**(1,186)**	**(1,186)**	**(778)**	**408**	**402**	**(176)**
Pension Fund	**3,350**	**3,264**	**2,875**	**(389)**	**0**	**(498)**
Provision for excess inflation	451	436	0	(436)	(150)	(439)
Utilities Inflation Provision	300	300	0	(300)	(200)	(300)
Pay and Price Inflation	**751**	**736**	**0**	**(736)**	**(350)**	**(739)**
Contingency	1,500	1,500	0	(1,500)	(750)	(821)
Single Status/Equal Pay	100	100	4	(96)	0	(60)
Bad Debt Provision	500	86	482	395	0	(271)
Loss of income - P3/P4	400	400	0	(400)	(400)	(400)
Loss of HB Admin grant	200	179	0	(179)	(179)	(200)
Reduction in Education Services Grant	819	0	0	0	0	0
Apprenticeship Levy	450	450	215	(235)	(50)	0
Revenuisation and miscellaneous	889	1,387	956	(432)	0	(1,743)
Contingencies and provisions	**4,858**	**4,103**	**1,656**	**(2,447)**	**(1,379)**	**(3,495)**
Other income	0	0	(56)	(56)	0	(280)
CHAS IP/Dividend	(1,152)	(1,152)	(1,200)	(48)	0	(50)
Income items	**(1,152)**	**(1,152)**	**(1,256)**	**(104)**	**0**	**(330)**
Appropriations: CS Reserves	(667)	(19)	(19)	0	0	0
Appropriations: E&R Reserves	4	329	331	2	0	2
Appropriations: CSF Reserves	283	346	346	(0)	0	0
Appropriations: C&H Reserves	(104)	600	0	(600)	0	0
Appropriations:Public Health Reserves	(600)	(947)	(347)	600	0	0
Appropriations:Corporate Reserves	(2,443)	1,792	4,235	2,443	0	(3,093)
Appropriations/Transfers	**(3,528)**	**2,102**	**4,546**	**2,445**	**0**	**(3,091)**
Depreciation/Impairment	**(22,318)**	**(18,966)**	**(18,966)**	**0**	**0**	**0**
Central Items	**(5,809)**	**505**	**(422)**	**(926)**	**(1,344)**	**(8,136)**
Levies	**933**	**933**	**933**	**(0)**	**0**	**0**
TOTAL CORPORATE PROVISIONS	**(4,876)**	**1,437**	**511**	**(926)**	**(1,344)**	**(8,136)**

Appendix 3A

Capital Programme Outturn Position 2017/18

Description	Budget 2017-18	Outturn 2017-18	Variance	Reason for Variance
Capital	**40,007,000**	**32,230,009**	**(7,776,991)**	
Corporate Services	**13,468,250**	**8,243,541**	**(5,224,709)**	
Business Improvement	**1,810,280**	**866,196**	**(944,084)**	
Customer Contact Programme	1,006,420	157,408	(849,012)	Contract Stage Payments not paid as work not delivered
Environmental Asset Management	250,460	224,219	(26,241)	Forecast slippage on the programme established after P8
Planning&Public Protection Sys	155,000	82,273	(72,727)	Forecast slippage on the programme established after P8
Replacement SC System	398,400	402,296	3,896	Phase 1 overspend funded from Adult Social Care Reserve - Phase 2 £200k Budget Slipped into 2018-19
Facilities Management Total	**2,658,030**	**2,039,381**	**(618,649)**	
Morden Park House Courtyard	125,000	79,955	(45,045)	Programme slipped against P8 forecast
Capital Building Works	332,500	328,968	(3,532)	
Civic Centre Staff Entrance	200,000	1,385	(198,615)	Projected start date delayed
Civic Centre Block Paving	75,000	5,185	(69,815)	Projected start date delayed
Civic Centre Passenger Lifts	0	14,686	14,686	Late invoice on the scheme
Invest to Save schemes	1,478,720	1,398,103	(80,617)	Programme slipped against P8 forecast
Water Safety Works	153,990	112,522	(41,468)	Budget in 2018-19 so no slippage of budget
Asbestos Safety Works	292,820	98,577	(194,243)	Budget in 2018-19 so no slippage of budget
Infrastructure & Transactions	**2,268,190**	**1,033,644**	**(1,234,546)**	
Disaster recovery	513,790	119,500	(394,290)	Programme slipped against P8 forecast
Equipment and Enhancement	978,400	914,144	(64,256)	Budget in 2018-19 so no slippage of budget
PABX Replacement	776,000	0	(776,000)	Programme slipped against P8 forecast spend will be in 2018-19
Resources	**165,870**	**33,820**	**(132,050)**	
Improving Information Systems	18,070	18,450	380	
ePayments Project	106,800	15,370	(91,430)	Programme slipped against P8 forecast
Invoice Scanning SCIS/FIS	41,000	0	(41,000)	Start of Project Delayed
Corporate Items	**6,565,880**	**4,270,500**	**(2,295,380)**	
Acquisitions Budget	5,580,410	4,270,500	(1,309,910)	Corporate Budget will be moved to 2018-19
Housing Company	949,470	0	(949,470)	Start of Project Delayed will be moved to 2018-19, initial spend of £160k incurred in May 2018
Multi-Functioning Device (MFD)	36,000	0	(36,000)	Lease Budget
Community and Housing	**1,801,580**	**1,110,766**	**(690,814)**	
Adult Social Care	**39,850**	**34,526**	**(5,324)**	
Laptops for Other Staff	4,500	1,001	(3,499)	Slippage on the Project will be moved to 2018-19 funded by un-ringfenced grant
Mosaic Report Development	35,350	33,525	(1,825)	Slippage on the Project will be moved to 2018-19 funded by un-ringfenced grant
Housing	**962,490**	**819,673**	**(142,817)**	
Disabled Facilities Grant	962,490	819,889	(142,601)	Unspent budget will be moved to 2018-19
Project General	0	(216)	(216)	
Libraries	**799,240**	**256,567**	**(542,673)**	
Colliers Wood Library Re-Fit	200,000	183,255	(16,745)	Slippage against final forecast
Colliers Wood Library	500,560	0	(500,560)	New Lease for Colliers Wood Library spend is shown elsewhere on the Authority's Balance Sheet
Library Self Service	22,730	30,422	7,692	Overspend offset by small underspends elsewhere within the programme
Libraries Opportunity Fund	75,950	42,891	(33,059)	Expenditure and Grant Transferred to Revenue

Appendix 3A

Capital Programme Outturn Position 2017/18

Description	Budget 2017-18	Outturn 2017-18	Variance	Reason for Variance
Children Schools & Families	**7,059,650**	**6,035,776**	**(1,023,874)**	
Primary Schools	**1,185,440**	**1,044,709**	**(140,731)**	
West Wimbledon Capital Maintenanc	50,000	47,694	(2,306)	
Hatfeild Capital Maintenance	29,870	30,823	953	
Hatfield School Expansion	13,330	8,646	(4,684)	
Hillcross Capital Maintenance	40,310	39,054	(1,256)	
Joseph Hood Capital Maintenance	21,000	19,995	(1,005)	
Joseph Hood School Expansion	2,720	0	(2,720)	
Dundonald Capital Maintenance	47,300	27,023	(20,277)	Slippage on the Project will be moved to 2018-19
Dundonald School Expansion	86,070	55,368	(30,702)	Slippage on the Project will be moved to 2018-19
Merton Park Capital Maintenance	10,900	11,413	513	
Pelham Capital Maintenance	41,800	38,151	(3,649)	
Poplar School Expansion	1,000	0	(1,000)	
Wimbledon Chase Capital Maintenanc	82,600	82,528	(72)	
Wimbledon Park Capital Maintenance	24,500	23,187	(1,313)	
Malmesbury Capital Maintenance	32,000	31,461	(539)	
Morden Capital Maintenance	110,000	93,618	(16,382)	Slippage on the Project will be moved to 2018-19
Liberty Capital Maintenance	16,360	11,000	(5,360)	
Links Capital Maintenance	16,050	16,040	(10)	
Singelgate Capital Maintenance	64,000	64,242	242	
Singlegate School Expansion	89,000	77,760	(11,240)	Slippage on the Project will be moved to 2018-19
St Marks Capital Maintenance	105,900	96,661	(9,239)	
Lonesome Capital Maintenance	99,900	100,572	672	
Sherwood Capital Maintenance	82,510	84,350	1,840	
Stanford Capital Maintenance	48,000	15,675	(32,325)	Slippage on the Project will be moved to 2018-19
William Morris Capital maintenance	41,820	41,815	(5)	
St Mary's RC School Expansion	28,500	27,634	(866)	
Secondary School	**3,621,700**	**3,083,021**	**(538,679)**	
Harris Academy Merton	2,840,940	2,457,811	(383,129)	Slippage on the Project will be moved to 2018-19
Rutlish Capital Maintenance	80,000	129,531	49,531	£20k offset by various underspends within the capital maintenance budget, £29k clawed back from 2018-19
Harris Academy Wimbledon	700,760	495,680	(205,080)	Slippage on the Project will be moved to 2018-19
SEN	**1,758,630**	**1,542,464**	**(216,166)**	
Perseid Capital Maintenance	9,550	9,446	(104)	
Perseid School Expansion	1,368,010	1,302,049	(65,961)	Slippage on the Project will be moved to 2018-19
Cricket Green School Expansion	273,140	230,969	(42,171)	Slippage on the Project will be moved to 2018-19
Harris Morden Sec Autism Unit	30,000	0	(30,000)	Slippage on the Project will be moved to 2018-19
Further SEN Provision	77,930	0	(77,930)	Slippage on the Project will be moved to 2018-19
CSF Schemes	**493,880**	**365,581**	**(128,299)**	
Children's Safeguarding	30,000	1,691	(28,309)	Start of Scheme delayed slipped into 2018-19
Loans to Schools Capital	100,000	0	(100,000)	New Capital Loan of £100k shown on the Balance Sheet
Devolved Formula Capital	363,880	363,890	10	

Appendix 3A

Capital Programme Outturn Position 2017/18

Description	Budget 2017-18	Outturn 2017-18	Variance	Reason for Variance
Environment and Regeneration	**17,677,520**	**16,839,927**	**(837,593)**	
Public Protection and Developm	**203,240**	**230,544**	**27,304**	
On Street Parking - P&D	0	28,480	28,480	Section 106 Scheme moved from Reveneu
CCTV (match funding)	191,740	191,104	(636)	
Air Pollution Monitoring	11,500	10,960	(540)	
Street Scene & Waste	**1,498,080**	**1,408,292**	**(89,788)**	
Replacement of Fleet Vehicles	208,000	155,226	(52,774)	Unspent Balance will offset GPS Vehicle Tracking Overspend - remainder to be slipped
GPS Vehical Tracking Equipment	159,990	191,863	31,873	Overspend offset against fleet vehicles underspend
Alley Gating Scheme	40,000	32,841	(7,159)	
Wheelie Bins Pilot	5,500	0	(5,500)	
SLWP IT and Depot Investment	112,710	56,483	(56,227)	Slippage in the programme unspent balance to be moved to 2018-19
SLWP - Replacement of Fleet Vehicles	971,880	971,880	0	
Sustainable Communities	**15,976,200**	**15,201,091**	**(775,109)**	
Street Trees	**60,000**	**57,809**	**(2,191)**	
Street Tree Programme	60,000	57,809	(2,191)	
Unallocated Roads Budget (unsp	**0**	**(6,498)**	**(6,498)**	
Bus Stop Compliance	0	(6,498)	(6,498)	TfL Scheme will reschedule to 2018-19
Highways & Footways	**4,507,430**	**4,443,513**	**(63,917)**	
s106 Mawson Close (B719)	20,000	12,818	(7,182)	
Street Lighting Replacement Pr	290,000	300,724	10,724	Overspend clawed back from 2018-19 Budget
Accesibility Programme	146,340	128,660	(17,680)	TfL Scheme will reschedule to 2018-19
Casualty Reduction & Schools	378,840	386,216	7,376	TfL Scheme will reschedule to 2018-19
A298/A238 Strategic Corridor	118,050	78,233	(39,817)	TfL Scheme will reschedule to 2018-19
Traffic Schemes	156,000	157,680	1,680	Overspend clawed back from 2018-19 Budget
Surface Water Drainage	69,000	62,067	(6,933)	
Repairs to Footways	1,000,000	1,005,959	5,959	Overspend clawed back from 2018-19 Budget
Maintain AntiSkid and Coloured	90,000	89,210	(790)	
Borough Roads Maintenance	1,500,000	1,499,288	(712)	
Highways bridges & structures	260,000	255,335	(4,665)	
B707-9 Wimb'n Wayfinding Disks	37,890	47,379	9,489	Overspend funded by an additional contribution from Love Wimbledon
Tfl Principal Road Maint	427,500	419,945	(7,555)	TfL Scheme will reschedule to 2018-19
B706 Boxley Road	13,810	0	(13,810)	Section 106 Scheme balance slipped into 2018-19
Cycle Route Improvements	**972,090**	**903,196**	**(68,894)**	
TfL Cycle Quietways	184,940	166,244	(18,696)	TfL Scheme will reschedule to 2018-19
Cycle access/parking	275,800	252,720	(23,080)	TfL Scheme will reschedule to 2018-19
Borough Cycle Programme	10,730	10,730	0	
Cycle Improvements	120,870	66,039	(54,831)	TfL Scheme will reschedule to 2018-19
Beddington Lane Cycle Route	379,750	407,463	27,713	TfL Scheme will reschedule to 2018-19
Mitcham Transport Improvements	**233,880**	**187,197**	**(46,683)**	
Mitcham Town Centre	233,880	187,197	(46,683)	TfL Scheme will reschedule to 2018-19
Electric Vehicle Infrastructur	**15,000**	**15,000**	**0**	
Electric Vehicle Infrastructur	15,000	15,000	0	
Tackling Traffic Congestion	**410,950**	**409,965**	**(985)**	
Traffic Schemes	410,950	409,965	(985)	
Colliers Wood Area Regeneratio	**166,100**	**180,450**	**14,350**	
Colliers Wd- Regeneration Fund	136,100	136,100	(0)	
Singlegate School House	30,000	44,350	14,350	Overspend funded from underspends elsewhere ithin the programme

Appendix 3A

Capital Programme Outturn Position 2017/18

Description	Budget 2017-18	Outturn 2017-18	Variance	Reason for Variance
Mitcham Area Regeneration	**2,082,260**	**1,444,979**	**(637,281)**	
Mitcham Major schemes - TfL	1,210,830	1,196,467	(14,363)	TfL Scheme will reschedule to 2018-19
Rediscover Mitcham S106	232,650	232,650	0	
Canons - Parks for People	638,780	15,862	(622,918)	Delay in the scheme will be moved to 2018-19
Borough Regeneration	**550,940**	**438,046**	**(112,894)**	
Wandle Project	370,790	258,968	(111,822)	Delay in the scheme will be moved to 2018-19
Brighter Business	27,050	27,050	0	
B591b Shop Front Improvement	82,300	83,219	919	
Bungalow A	40,000	40,000	0	
Town Centre Investment	30,800	28,810	(1,990)	
Leisure Development & Sports Fac	**6,492,810**	**6,882,772**	**389,962**	
Morden Leisure Centre	6,068,350	6,254,308	185,958	Will be clawed back from 2018-19 Budget
Leisure Centre Plant & Machine	424,460	628,464	204,004	Part will be clawed back from 2018-19
Parks	**430,850**	**244,661**	**(186,189)**	
Parks Bins - Finance Lease	34,000	0	(34,000)	
Parks Investment	201,000	211,111	10,111	Will be clawed back from 2018-19 Budget
Canons - Parks for People	180,450	18,150	(162,300)	Delay in the scheme will be moved to 2018-19
Canons - Parks for People	15,400	15,400	(0)	
Mortuary Provision	**53,890**	**0**	**(53,890)**	
Project General	53,890	0	(53,890)	Delay in a Multi-Autority Scheme slipped into 2018-19

Appendix 3B

Proposed Budget to be slipped 2017/18 to 2018/19

Description	£	Justification
Total Slippage	**7,411,250**	
Corporate Services		
Customer Contact Programme	849,010	Work not completed yet , therefore not paid
Environmental Asset Management	26,240	Forecast slippage on the programme
Planning&Public Protection Sys	72,730	Forecast slippage on the programme
Replacement SC System - Phase 2	200,000	The capital element of Phase 2 will commence in 2018-19
Morden Park House Courtyard	45,040	Project not fully complete by 31-3-18
Civic Centre Staff Entrance	198,610	The majority of the project to be undertaken in 2018-19
Civic Centre Block Paving	69,820	The majority of the project to be undertaken in 2018-19
Invest to Save Schemes	27,750	Part of multi-year programme linked to savings
Disaster recovery	394,290	Forecast slippage on the programme
PABX Replacement	776,000	Whole scheme has slipped into 2018-19
ePayments Project	91,050	Forecast slippage on the programme
Invoice Scanning SCIS/FIS	41,000	Forecast slippage on the programme
Acquisitions Budget	1,309,910	Corporate Budget will be added to budget in 2018-19
Housing Company	949,470	Delayed, budget to be moved into 2018-19
Total Corporate Services	**5,050,920**	
Community and Housing		
Laptops for Other Staff	3,500	The review of the mobile working initiative delayed .
Mosaic Report Development	1,820	Work scheduled for completion early in 2018-19
Disabled Facilities Grant	142,600	Forecast slippage on the programme
Colliers Wood Library Re-Fit	16,740	Required works will be completed early in 2018-19
Total Community and Housing	**164,660**	
Children Schools & Families		
Dundonald Capital maintenance	20,280	Works delayed to Easter 2018 school hoilidays
Dundonald School Expansion	30,700	Works delayed to Easter 2018 school hoilidays
Morden School Expansion	16,380	Works delayed to Easter 2018 school hoilidays
Singlegate School Expansion	11,000	Works delayed to Easter 2018 school hoilidays
St Marks Capital maintenance	9,240	Slippage on the programme
Stanford Capital maintenance	32,330	Works delayed to Easter 2018 school hoilidays
Harris Academy Merton	383,130	Slippage on the programme
Harris Academy Wimbledon	205,080	Slippage on the programme
Perseid Green School Expansion	65,960	Slippage on the programme
Cricket Green School Expansion	42,170	Slippage on the programme
Harris Morden Sec Autism Unit	30,000	Slippage on the programme
Further SEN Provision	77,930	Slippage on the programme
Children's Safeguarding	28,310	Slippage on the programme
Total Children Schools & Families	**952,510**	

Appendix 3B

Proposed Budget to be slipped 2017/18 to 2018/19

Description	£	Justification
Environment and Regeneration		
Replacement of Fleet Vehicles	20,900	Required slippage following service review of replacement vehicle programme and service provision
SLWP IT and Depot Investment	56,230	Outstanding 2018-19 investment in the SLWP
Bus Stop Compliance	6,500	TfL Scheme slipped into 2018-19
s106 Mawson Close (B719)	7,180	S106 scheme works have slipped into 2018-19
Accesibility Programme	17,680	TfL Scheme slipped into 2018-19
Casualty Reduction & Schools	(7,380)	TfL Scheme slipped into 2018-19
A298/A238 Strategic Corridor	39,820	TfL Scheme slipped into 2018-19
Tfl Principal Road Maint	7,550	TfL Scheme slipped into 2018-19
B706 Boxley Road	13,810	S106 scheme works have slipped into 2018-19
TfL Cycle Quietways	18,700	TfL Scheme slipped into 2018-19
Cycle access/parking	23,080	TfL Scheme slipped into 2018-19
Cycle Improvements	54,830	TfL Scheme slipped into 2018-19
Beddington Lane Cycle Route	(27,710)	TfL Scheme slipped into 2018-19
Mitcham Town Centre	46,680	TfL Scheme slipped into 2018-19
Mitcham Major schemes - TfL	14,360	TfL Scheme slipped into 2018-19
Canons - Parks for People	622,920	HLF Funded Scheme which has slipped
Wandle Project	111,820	HLF Funded Scheme which has slipped
Canons - Parks for People	162,300	HLF Funded Scheme which has slipped
Mortuary Provision	53,890	The scheme is led by St. George's Hospital Trust request for funding will not be made until 2018-19
Total Environment and Regeneration	**1,243,160**	

Appendix 3C

Movement in the Approved Capital Programme 2018-19

	2018-19 Budget					
Department	**Budget 2018-19**	**Slippage into 2018-19**	**Reprofiled into 2019-20**	**New 2018-19**	**Clawback**	**Revised Budget 2018-19**
Corporate Services	**23,482,360**	**5,050,920**	**(9,036,660)**	**0**	**0**	**19,496,620**
Community and Housing	**772,650**	**164,660**	**0**	**0**	**0**	**937,310**
Children Schools & Families	**15,158,000**	**952,510**	**(3,946,000)**	**495,000**	**(28,730)**	**12,630,780**
Environment and Regeneration	**21,852,890**	**1,243,160**	**(1,000,000)**	**1,039,250**	**(323,920)**	**22,811,380**
Total	**61,265,900**	**7,411,250**	**(13,982,660)**	**1,534,250**	**(352,650)**	**55,876,090**

Capital	**61,265,900**	**7,411,250**	**(13,982,660)**	**1,534,250**	**(352,650)**	**55,876,090**
Corporate Services	**23,482,360**	**5,050,920**	**(9,036,660)**	**0**	**0**	**19,496,620**
Business Improvement	**2,412,000**	**1,147,980**	**0**	**0**	**0**	**3,559,980**
Customer Contact Programme	1,050,000	849,010	0	0	0	1,899,010
Aligned Assets	75,000	0	0	0	0	75,000
Environmental Asset Management	0	26,240	0	0	0	26,240
Revenue and Benefits	400,000	0	0	0	0	400,000
Capita Housing	100,000	0	0	0	0	100,000
Planning&Public Protection Sys	395,000	72,730	0	0	0	467,730
Spectrum Spatial Analysis	42,000	0	0	0	0	42,000
Replacement SC System	350,000	200,000	0	0	0	550,000
Facilities Management Total	**2,960,000**	**341,220**	**0**	**0**	**0**	**3,301,220**
Morden Park House Courtyard	0	45,040	0	0	0	45,040
Capital Building Works	300,000	0	0	0	0	300,000
Asbestos Safety Works	250,000	0	0	0	0	250,000
Water Safety Works	100,000	0	0	0	0	100,000
Civic Centre Boilers	300,000	0	0	0	0	300,000
Civic Centre Staff Entrance	0	198,610	0	0	0	198,610
Civic Centre Block Paving	0	69,820	0	0	0	69,820
Invest to Save schemes	2,010,000	27,750	0	0	0	2,037,750
Infrastructure & Transactions	**1,085,000**	**1,170,290**	**0**	**0**	**0**	**2,255,290**
Disaster recovery site	**0**	**394,290**	**0**	**0**	**0**	**394,290**
Disaster recovery	0	394,290	0	0	0	394,290
Planned Replacement Programme	**1,085,000**	**776,000**	**0**	**0**	**0**	**1,861,000**
Project General	275,000	0	0	0	0	275,000
Data Centre Support Equipment	300,000	0	0	0	0	300,000
PABX Replacement	0	776,000	0	0	0	776,000
IT Equipment	510,000	0	0	0	0	510,000
Resources	**0**	**132,050**	**0**	**0**	**0**	**132,050**
ePayments Project	0	91,050	0	0	0	91,050
Invoice Scanning SCIS/FIS	0	41,000	0	0	0	41,000
Corporate Items	**17,025,360**	**2,259,380**	**(9,036,660)**	**0**	**0**	**10,248,080**
Acquisitions Budget	5,791,770	1,309,910	0	0	0	7,101,680
Capital Bidding Fund	1,186,400	0	0	0	0	1,186,400
Housing Company	9,587,190	949,470	(9,036,660)	0	0	1,500,000
Westminster Coroners Court	460,000	0	0	0	0	460,000

Appendix 3C

Movement in the Approved Capital Programme 2018-19

	2018-19 Budget						
Narrative	**Budget 2018-19**	**Slippage into 2018-19**	**Reprofiled into 2019-20**	**New 2018-19**	**Virement**	**Clawback**	**Revised Budget 2018-19**
Community and Housing	**772,650**	**164,660**	**0**	**0**	**0**	**0**	**937,310**
Adult Social Care	**43,750**	**5,320**	**0**	**0**	**0**	**0**	**49,070**
Laptops for Other Staff	0	3,500	0	0	0	0	3,500
Mosaic Report Development	0	1,820	0	0	0	0	1,820
Telehealth	43,750	0	0	0	0	0	43,750
Housing	**628,900**	**142,600**	**0**	**0**	**0**	**0**	**771,500**
Disabled Facilities Grant	**628,900**	**142,600**	**0**	**0**	**0**	**0**	**771,500**
Libraries	**100,000**	**16,740**	**0**	**0**	**0**	**0**	**116,740**
Colliers Wood Library Re-Fit	0	16,740	0	0	0	0	16,740
Libraries Management System	100,000	0	0	0	0	0	100,000
Children Schools & Families	**15,158,000**	**952,510**	**(3,946,000)**	**495,000**	**0**	**(28,730)**	**12,630,780**
Primary Schools	**650,000**	**119,930**	**0**	**0**	**0**	**(28,730)**	**741,200**
Dundonald Capital maintenance	0	20,280	0	0	0	0	20,280
Dundonald School Expansion	0	30,700	0	0	0	0	30,700
Morden Capital maintenance	0	16,380	0	0	0	0	16,380
Singlegate School Expansion	0	11,000	0	0	0	0	11,000
St Marks Capital maintenance	0	9,240	0	0	0	0	9,240
Stanford Capital maintenance	0	32,330	0	0	0	0	32,330
School Capital Maintenance	650,000	0	0	0	0	(28,730)	621,270
Secondary School	**7,105,010**	**588,210**	**(700,000)**	**495,000**	**0**	**0**	**7,488,220**
Harris Academy Morden	843,560	0	(700,000)	0	0	0	143,560
Harris Academy Merton	320,960	383,130	0	0	0	0	704,090
St Mark's Academy	200,000	0	0	0	0	0	200,000
Rutlish School Synthetic Pitch	0	0	0	495,000	0	0	495,000
Harris Academy Wimbledon	5,740,490	205,080	0	0	0	0	5,945,570
SEN	**7,264,090**	**216,060**	**(3,246,000)**	**0**	**0**	**0**	**4,234,150**
Perseid School Expansion	610,000	65,960	0	0	0	0	675,960
Cricket Green School Expansion	0	42,170	(2,046,000)	0	5,114,000	0	3,110,170
Harris Morden Sec Autism Unit	1,330,000	30,000	(1,200,000)	0	0	0	160,000
Further SEN Provision	5,324,090	77,930	0	0	(5,114,000)	0	288,020
CSF Schemes	**138,900**	**28,310**	**0**	**0**	**0**	**0**	**167,210**
Children's Safeguarding	30,000	28,310	0	0	0	0	58,310
Devolved Formula Capital	0	0	0	0	0	0	0

Appendix 3C

Movement in the Approved Capital Programme 2018-19

	2018-19 Budget						
Narrative	**Budget 2018-19**	**Slippage into 2018-19**	**Reprofiled into 2019-20**	**New 2018-19**	**Virement**	**Clawback**	**Revised Budget 2018-19**
Environment and Regeneration	**21,852,890**	**1,243,160**	**(1,000,000)**	**1,039,250**	**0**	**(323,920)**	**22,811,380**
Public Protection and Developm	**0**	**0**	**0**	**39,490**	**0**	**0**	**39,490**
CCTV Investment	**0**	**0**	**0**	**39,490**	**0**	**0**	**39,490**
Street Scene & Waste	**5,931,500**	**77,130**	**0**	**0**	**0**	**0**	**6,008,630**
Replacement of Fleet Vehicles	542,000	20,900	0	0	0	0	562,900
Alley Gating Scheme	40,000	0	0	0	0	0	40,000
Wheelie Bins Pilot	5,500	0	0	0	0	0	5,500
Project General	0	56,230	0	0	0	0	56,230
SLWP - Waste Bins	2,674,000	0	0	0	0	0	2,674,000
SLWP - Replacement of Fleet Vehic	2,670,000	0	0	0	0	0	2,670,000
Sustainable Communities	**15,921,390**	**1,166,030**	**(1,000,000)**	**999,760**	**0**	**(323,920)**	**16,763,260**
Street Tree Programme	60,000	0	0	0	0	0	60,000
Bus Stop Compliance	0	6,500	0	(6,500)	0	0	0
s106 Mawson Close (B719)	0	7,180	0	0	0	0	7,180
Street Lighting Replacement Pr	509,000	0	0	0	0	(10,720)	498,280
Accesibility Programme	0	17,680	0	180,000	0	0	197,680
Casualty Reduction & Schools	0	(7,380)	0	211,950	0	0	204,570
A298/A238 Strategic Corridor	0	39,820	0	41,180	0	0	81,000
Traffic Schemes	150,000	0	0	0	0	(1,680)	148,320
Surface Water Drainage	72,000	0	0	0	0	0	72,000
Borough wide 20mph Limit	0	0	0	74,000	0	0	74,000
Repairs to Footways	1,000,000	0	0	0	0	(5,960)	994,040
Maintain AntiSkid and Coloured	90,000	0	0	0	0	0	90,000
Borough Roads Maintenance	1,500,000	0	0	0	0	0	1,500,000
Highways bridges & structures	260,000	0	0	0	0	0	260,000
Cycling in Residential Streets	0	0	0	180,000	0	0	180,000
Commonside East/Windmill Rd	0	0	0	40,000	0	0	40,000
Safer Walking Routes/Streets	0	0	0	18,000	0	0	18,000
Tfl Principal Road Maint	0	7,550	0	92,450	0	0	100,000
B706 Boxley Road	0	13,810	0	0	0	0	13,810
TfL Cycle Quietways	0	18,700	0	(18,700)	0	0	0
Cycle access/parking	0	23,080	0	36,920	0	0	60,000
Cycle Improvements	0	54,830	0	0	0	0	54,830
Beddington Lane Cycle Route	0	(27,710)	0	393,710	0	0	366,000
Figges Marsh Roundabout	0	0	0	64,000	0	0	64,000
Mitcham Town Centre	0	46,680	0	453,000	0	0	499,680
Unallocated TfL	1,000,000	0	0	(1,000,000)	0	0	0
Mitcham Major schemes - TfL	0	14,360	0	0	0	0	14,360
Mitcham Cricket Green Imps	0	0	0	50,000	0	0	50,000

Appendix 3C

Movement in the Approved Capital Programme 2018-19

	2018-19 Budget						
Narrative	**Budget 2018-19**	**Slippage into 2018-19**	**Reprofiled into 2019-20**	**New 2018-19**	**Virement**	**Clawback**	**Revised Budget 2018-19**
Canons - Parks for People	2,032,100	622,920	0	0	0	0	2,655,020
Transportation Enhancements	1,000,000	0	(1,000,000)	0	0	0	0
Wandle Project	0	111,820	0	46,000	0	0	157,820
B591b Shop Front Improvement	0	0	0	79,000	0	0	79,000
Morden Leisure Centre	6,389,320	0	0	0	0	(185,960)	6,203,360
Wimbledon Park Lake De-Silting	106,500	0	0	0	0	0	106,500
Leisure Centre Plant & Machine	300,000	0	0	0	0	(109,490)	190,510
Parks Bins - Finance Lease	27,500	0	0	0	0	0	27,500
Parks Investment	307,500	0	0	0	0	(10,110)	297,390
Canons - Parks for People	1,117,470	162,300	0	0	0	0	1,279,770
Abbey Rec Improvements	0	0	0	39,750	0	0	39,750
B737b Merton Park Green Walks	0	0	0	25,000	0	0	25,000
Mortuary Provision	0	53,890	0	0	0	0	53,890

Appendix 3C

Movement in the Approved Capital Programme 2019-22

	2019-20 Budget				2020-21 Budget			2021-22 Budget		
	Budget 2019-20	Reprofiled from 2018-19	Reprofiled to 2020-21	Revised Budget 2019-20	Budget 2020-21	Reprofiled from 2019-20	Revised Budget 2020-21	Budget 2021-22	Reprofiled from 2020-21	Revised Budget 2021-22
Corporate Services	**15,818,360**	**9,036,660**	**0**	**24,855,020**	**3,944,980**	**0**	**3,944,980**	**3,862,000**	**0**	**3,862,000**
Community and Housing	**480,000**	**0**	**0**	**480,000**	**630,000**	**0**	**630,000**	**280,000**	**0**	**280,000**
Children Schools & Families	**8,107,240**	**3,946,000**	**0**	**12,053,240**	**3,202,300**	**0**	**3,202,300**	**650,000**	**0**	**650,000**
Environment and Regeneration	**9,060,170**	**0**	**(2,000,000)**	**7,060,170**	**5,017,000**	**2,000,000**	**7,017,000**	**4,052,000**	**1,000,000**	**5,052,000**
Total	**33,465,770**	**12,982,660**	**(2,000,000)**	**44,448,430**	**12,794,280**	**2,000,000**	**14,794,280**	**8,844,000**	**1,000,000**	**9,844,000**
Capital	**33,465,770**	**12,982,660**	**(2,000,000)**	**44,448,430**	**12,794,280**	**2,000,000**	**14,794,280**	**8,844,000**	**1,000,000**	**9,844,000**
Corporate Services	**15,818,360**	**9,036,660**	**0**	**24,855,020**	**3,944,980**	**0**	**3,944,980**	**3,862,000**	**0**	**3,862,000**
Customer Contact Programme	250,000	0	0	250,000	0	0	0	1,900,000	0	1,900,000
Capital Building Works	300,000	0	0	300,000	300,000	0	300,000	300,000	0	300,000
Asbestos Safety Works	250,000	0	0	250,000	250,000	0	250,000	250,000	0	250,000
Water Safety Works	100,000	0	0	100,000	100,000	0	100,000	100,000	0	100,000
Civic Centre Lighting Upgrade	300,000	0	0	300,000	0	0	0	0	0	0
Invest to Save schemes	300,000	0	0	300,000	300,000	0	300,000	300,000	0	300,000
I&TProject General	200,000	0	0	200,000	200,000	0	200,000	200,000	0	200,000
IT Equipment	430,000	0	0	430,000	860,000	0	860,000	770,000	0	770,000
ePayments Project	0	0	0	0	125,000	0	125,000	0	0	0
Housing Company	13,088,360	9,036,660	0	22,125,020	1,809,980	0	1,809,980	0	0	0
Multi-Functioning Device (MFD)	600,000	0	0	600,000	0	0	0	0	0	0
Community and Housing	**480,000**	**0**	**0**	**480,000**	**630,000**	**0**	**630,000**	**280,000**	**0**	**280,000**
Disabled Facilities Grant	280,000	0	0	280,000	280,000	0	280,000	280,000	0	280,000
West Barnes Library Re-Fit	200,000	0	0	200,000	0	0	0	0	0	0
Library Self Service	0	0	0	0	350,000	0	350,000	0	0	0
Children Schools & Families	**8,107,240**	**3,946,000**	**0**	**12,053,240**	**3,202,300**	**0**	**3,202,300**	**650,000**	**0**	**650,000**
Unlocated Primary School Proj	650,000	0	0	650,000	650,000	0	650,000	650,000	0	650,000
Harris Academy Morden	2,199,940	700,000	0	2,899,940	0	0	0	0	0	0
St Mark's Academy	2,552,300	0	0	2,552,300	2,552,300	0	2,552,300	0	0	0
Harris Academy Wimbledon	1,600,000	0	0	1,600,000	0	0	0	0	0	0
Cricket Green School Expansion	0	2,046,000	0	2,046,000	0	0	0	0	0	0
Harris Morden Sec Autism Unit	0	1,200,000	0	1,200,000	0	0	0	0	0	0
Further SEN Provision	1,000,000	0	0	1,000,000	0	0	0	0	0	0
Admissions IT System	105,000	0	0	105,000	0	0	0	0	0	
Environment and Regeneration	**9,060,170**	**0**	**(2,000,000)**	**7,060,170**	**5,017,000**	**2,000,000**	**7,017,000**	**4,052,000**	**1,000,000**	**5,052,000**
Public Protection and Developm	60,000	0	0	60,000	0	0	0	35,000	0	35,000
Replacement of Fleet Vehicles	300,000	0	0	300,000	300,000	0	300,000	300,000	0	300,000
Alley Gating Scheme	40,000	0	0	40,000	40,000	0	40,000	40,000	0	40,000
Street Tree Programme	60,000	0	0	60,000	60,000	0	60,000	60,000	0	60,000
Street Lighting Replacement Pr	290,000	0	0	290,000	290,000	0	290,000	290,000	0	290,000
Traffic Schemes	150,000	0	0	150,000	150,000	0	150,000	150,000	0	150,000
Surface Water Drainage	77,000	0	0	77,000	77,000	0	77,000	77,000	0	77,000
Repairs to Footways	1,000,000	0	0	1,000,000	1,000,000	0	1,000,000	1,000,000	0	1,000,000
Maintain AntiSkid and Coloured	90,000	0	0	90,000	90,000	0	90,000	90,000	0	90,000
Borough Roads Maintenance	1,200,000	0	0	1,200,000	1,200,000	0	1,200,000	1,200,000	0	1,200,000
Highways bridges & structures	260,000	0	0	260,000	260,000	0	260,000	260,000	0	260,000
Canons - Parks for People	301,040	0	0	301,040	0	0	0	0	0	0
Transportation Enhancements	3,000,000	0	(2,000,000)	1,000,000	1,000,000	2,000,000	3,000,000	0	1,000,000	1,000,000
Morden Leisure Centre	241,590	0	0	241,590	0	0	0	0	0	0
Wimbledon Park Lake De-Silting	1,250,000	0	0	1,250,000	0	0	0	0	0	0
Leisure Centre Plant & Machine	250,000	0	0	250,000	250,000	0	250,000	250,000	0	250,000
Parks Investment	295,000	0	0	295,000	300,000	0	300,000	300,000	0	300,000
Canons - Parks for People	195,540	0	0	195,540	0	0	0	0	0	0

Appendix 4

Subject: Miscellaneous Debt Update March 2018

1. LATEST ARREARS POSITION – MERTON'S AGED DEBTORS REPORT

1.1 A breakdown of departmental net miscellaneous debt arrears, as at 31 March 2018, is shown in column F of the table below.

1.2 Please note that on the 6 February 2017 the new financial computer system E5 went live and this included the raising and collection of invoices and the debt recovery system.

Sundry Debtors aged balance – 31 March 2018 – not including debt that is less than 30 days old (Please note the new system reports debt up to 30 days whereas previously we reported up to 39 days)

Department a	30 days to 6 months b	6 months to 1 year c	1 to 2 years d	Over 2 years e	March 18 arrears f	Sept 17 Arrears	Direction of travel
	£	£	£	£	£	£	
Env & Regeneration	1,025,710	141,926	500,947	197,143	1,865,726	2,330,047	↓
Corporate Services	755,601	73,195	92,603	57,380	978,779	1,399,184	↓
Housing Benefits	887,048	633,920	1,003,820	2,170,925	4,695,713	4,242,542	↑
Children, Schools & Families	239,450	354,443	231,454	227,370	1,052,717	1,360,416	↓
Community & Housing	1,429,695	704,959	1,112,573	1,688,347	4,935,575	4,204,826	↑
Chief Executive's	0	0	0	0	0	0	↓
CHAS 2013	12,272	6,643	35,145	43,416	97,475	160,380	↓
Total	4,349,776	1,915,086	2,976,542	4,384,581	13,625,985	13,697,395	↓
Mar-17	2,876,902	1,575,563	2,399,199	3,700,147	10,551,811		
Variance March 17 to March 18	*1,472,874*	*339,523*	*577,343*	*684,434*	*3,074,174*		↑

1.3 Since the position was last reported on 30 September 2017, the net level of arrears, i.e. invoices over 30 days old, has reduced by £71,410.

1.4 The new financial system (E5) was implemented on 6 February 2017 and there was an initial delay in raising new invoices. There was also a backlog of issuing invoices for Adult Social Care debt which was linked with the implementation of the new Social Care computer system (Mosaic). However, this backlog has now been addressed and invoicing was back on track in February 2018 as initially planned.

1.5 The two areas where there has been an increase in debt since the last reported in September 2017 are housing benefit overpayments and Community and Housing debt which is mainly due to an increase in Adult Social Care debt. Actions being taken in these two areas are detailed below in the report.

2 THE PROCESS FOR COLLECTION OF MISCELLANEOUS DEBT

2.1 In considering the current levels of debt, it is important to outline the general process Merton currently has in place to collect its arrears. In general terms the process has 5 stages, as detailed below, although processes employed vary by debt type. It is important to note that most debtors can not pay their outstanding liabilities other than by payment arrangements. Once a payment arrangement has been made it can not be changed without the debtors consent.

The process for collecting debt

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Invoice issued to debtor with 30 days allowed for payment.	After 30 days and following two requests for payment, a final warning notice is issued and the case passed to the Debt Recovery team.	The debt and debtor is evaluated to ensure the most effective recovery action is taken. This will include contacting debtors' direct and collecting payment or agreeing repayment plans and passing the debt to collection agents to collect on our behalf, bankruptcy proceedings, attachment to benefit etc.	If the debt remains unpaid then County Court action is taken by the Debt Recovery team's solicitor who administers this process.	The final stage is consideration of the debt for write-off if all other attempts to collect the debt have failed.

3. ACTION BEING TAKEN TO COLLECT OUTSTANDING DEBT

3.1 One of the two largest debts owed to the council is for Adult Social Care debt and the current level of debt is £5.43 million, an increase of £0.94 million since last reported in September 2017.

3.2 Over the past few year's council staff have been working closely and following new processes to manage this debt. This work involves regular joint meetings between the financial assessments, social services, client financial affairs and debt recovery teams to review the debts of individual clients and establish action plans for each one.

3.3 These actions include, but are not limited to: early intervention from social workers to prevent debts from getting out of control and to ensure that clients are supported earlier to get their finances in order; as part of their induction all new Social Workers spend time with the Financial Assessment Team, to understand how financial assessments are carried out; social workers also check to see if there any safeguarding issues around non-payment of bills and work very closely with the Welfare Benefits Officer; there is more use of credit checks and land registry checks when assessing/investigating debt issues; increased involvement from the client financial affairs team to take appointeeship for those without capacity or appropriate deputyship; Increased identification of cases where we will consider legal action to secure the debt and generally to share information and support each other in the collection and prevention of this debt. Although the debt has grown the actions being taken are mitigating the impact.

3.4 A new working group chaired by the Director of Community and Housing has been set up to monitor Community Care debt and to work across departments to improve processes and ensure best practice is in place to maximise collection of debts at all stages. As part of this a Lean review is taking place which will include the assessment and raising of invoices through to debt collection practices.

3.5 The table below shows the breakdown of Community Care debt by recovery action

Total Community Care Debt by recovery action as at March 2018 compared to June 2016, September 2016, December 2016, June 2017 and September 2017

Adult Social Care Debt	Jun 2016	% at stage	Sep 2016	% at stage	Dec 2016	% at stage	Jun 2017	% at stage	Sep-17	% at stage	Mar-18	% at stage
Invoice stage	387,608	9%	772,555	16%	646,210	13%	1,129,190	29%	476,610	11%	959,618	17%
Charge & Deferred Payment	775,880	18%	706,043	15%	635,671	13%	311,604	8%	305,710	7%	258,470	5%
Payment arrangement	462,801	11%	451,694	10%	235,667	5%	273,316	7%	256,469	6%	232,088	4%
Probate, DWP & Deputyship	944,870	22%	895,603	19%	771,456	15%	553,437	14%	580,404	13%	491,306	9%
Court action	141,345	3%	256,347	5%	188,264	4%	184,781	5%	142,352	3%	84,958	1%
Dept or service query	182,702	4%	51,821	1%	286,782	6%	90,530	2%	83,255	2%	71,185	1%
No action secured	1,460,347	33%	1,624,173	34%	2,186,747	44%	1,380,647	35%	2,653,529	58%	2,420,165	46%
J&P											920,885	17%
Total Debt	4,355,553		4,758,236		4,950,797		3,923,505		4,498,329		5,438,675	

3.6 In February 2018 agreement was reached with a specialist Adult Social Care debt collection company to collect some of our larger debts and debts for deceased debtors. This is initially a one year trial although already one case with a value of £31,000 has been paid in full.

3.7 In January 2018 we received full payment of £173,000 on an outstanding debt where we had a deferred payment arrangement in place.

3.8 The largest area of debt owed to the council is for housing benefit overpayments with the total level of debt being £8.4 million, of which £4.7 million is within the sundry debt system and the remainder of the debt is still within the housing benefit system.

3.9 The Department of Work and Pensions commenced a “Real Time” Information initiative at the end of September 2014 which was aimed at ensuring that earnings and pensions data within the housing benefit system matched that held by HMRC. At the same time they also commenced another initiative to identify fraud and error.

3.10 The DWP have provided additional funding to the council to undertake this work and up until March 2017 granted additional income based on targets met.

3.11 The Real Time information initiative continued throughout 2017/18 and will again run in 2018/19. The council receives up to 700 referrals every month where the information held in the HMRC system differs from that held in the housing benefit system.

3.12 Since the start or the Real Time information initiative over £5.4 million of overpayments have been identified. Where possible these overpayments are being recovered from on-going benefit payments. We are entitled to deduct between £10.95 and £23.35 per week from on-going housing benefit dependant on circumstances. Where the change has resulted in housing benefit being cancelled or nil entitlement we can contact the claimants employer and are paid a percentage deduction of their salary each month. So far we have over £300,000 secured by this method.

3.13 Although the overall housing benefit debt has increased there has been an increase in the amount of debt either being recovered from on-going benefit or on arrangements, with £3.0 million being recovered from on going benefit by reducing current housing benefit payments. Just under £5.7 million is on a payment arrangement or recovery from on going benefit

3.14 The table below shows breakdown of all housing benefit overpayments by recovery action.

Total Housing Benefit Debt by recovery action from March 16 to March 18 by quarter

Recovery Stage	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Mar-18
Invoice and Reminder stage	1,205,885	667,690	624,877	874,548	723,613	284,713	379,477	340,008
On-going recovery	3,105,644	2,928,207	3,048,093	3,032,558	2,928,992	3,363,611	3,354,237	3,032,656
Payment Arrangements	1,792,340	1,922,400	2,134,893	2,220,007	2,314,257	2,353,352	2,511,028	2,647,525
No Arrangements secured	1,870,006	2,528,002	2,544,392	2,162,070	2,113,587	2,665,410	2,387,794	2,427,693
Total HB Debt	**7,973,875**	**8,046,299**	**8,352,255**	**8,289,183**	**8,080,449**	**8,667,086**	**8,632,536**	**8,447,882**

3.15 We have continued to review and target all housing benefit debt. We have tried to improve the procedures at the beginning of the process when a debt is first identified by ensuring that invoices are raised as soon as possible to give the best chance of recovery, we are targeting debtors who are now in work and we will be applying to recover the overpayments from their employers and we are looking at the oldest debts to consider if they are still collectable. However, it should be noted that a lot of the housing benefit debt is very difficult to recover as the Council's powers of recovery are very limited unless the debtor works or owns their own property.

3.16 We are about to participate in a new DWP initiative to assist with the collection of unpaid overpayments. We will share our data with the DWP who will compare with HMRC data and highlight where customers are now working so that we can apply for an attachment to their earnings. An update on this will be provided at the end of June 18.

3.17 The table below shows the amount of debt written off in accordance with financial regulations and scheme of management in 2014/15, 2015/16, 2016/17 and 2017/18.

Debt written off since 2014/15 to date by debt type

	2014/15	2015/16	2016/17	2017/18				2017/18
	Total	Total	Total	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Debt type								
Sundry Debt	£347,726	£581,419	£129,338	£291,708	£0	£0	£151,609	£443,317
Housing benefit overpayments	£1,050,105	£510,352	£517,467	£0	£308,309	£78,041	£126,029	£512,379
Council Tax	£526,881	£951,280	£623,486	£0	£211,818	£399,568	£193,601	£804,987
Business Rates	£790,373	£659,514	£567,908	£136,709	£0	£241,446	£0	£378,155
Total	**£2,715,085**	**£2,702,565**	**£1,838,199**	**£428,417**	**£520,127**	**£719,055**	**£471,239**	**£2,138,838**

3.18 Of the business rates debt written off a large proportion relates to debts owed by businesses that went into liquidation. From 2014/15 to 2016/17 £2.017 million of business rates debt was written off and £1.071 million related to businesses that went into liquidation.

3.19 Although the debt written off within any of the years does not relate to one specific year it should be noted that in 2017/18 the council was collecting a net debt of £107.1 million in council tax (this includes the GLA potion), a net debt of £93.1 million in business rates (this includes Business Rates Supplement) and approximately £44 million raised through sundry debts.

3.20 Every effort is made to collect all outstanding debts and debts are only written off as a last resort. The council is still collecting some council tax debts that are greater than 6 years old or will have secured the debts against properties where possible.

4. SUNDRY DEBT COLLECTED

4.1 Based on previous years performance (2013/14 to 2015/16) an average of £56 million invoices were raised each year and 97.9% collected. This data is based at 31 December 2016 prior to the implementation of E5.

4.2 Active recovery action continues to be undertaken on all outstanding debts. Some of the debt owed for previous years would be secured against a charge on the property or deferred payment arrangement.

4.3 It is hoped that for the next quarterly report a more up to date position will be provided on previous years performance.

5. PROVISION FOR BAD AND DOUBTFUL DEBTS

5.1 Provision has been made in the draft 2017/18 account for writing off bad and doubtful debts held within the ASH, E5 and Housing benefits systems. These provisions are £3.441m for Accounts Receivable (including former ASH) miscellaneous debt and £6.504m for debt held in the Housing Benefits system, making a total General Fund provision for bad and doubtful debts of £9.945m. Clearly, every attempt is made to collect debts before write-off is considered. The current level of General Fund provision is analysed in the table below.

5.2 The Council adheres to the principles of the SORP when calculating its provisions. Merton's methodology is to provide on the basis of expected non collection using estimated collection rates for individual departmental debt which take account of the age of the debt.

Provision for Bad and Doubtful Debts

Department	Total Provision	
	At 31/03/2017	At 31/03/2018
	£000's	£000's
Env & Regeneration	294	607
Corporate Services	221	171
Housing Benefits	6,947	6,504
Children, Schools & Families	296	413
Community & Housing	2,148	2,250
Total	**9,906**	**9,945**

6. TOTAL DEBT DUE TO MERTON

The total amount due to Merton as at 31 March 2018 is detailed in the table below.

Total debt outstanding as at 31 March 2018 and compared with previous periods over the past 18 months

	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Mar 18
	£	£	£	£	£	£
Miscellanous sundry debt Note 1	12,406,364	13,588,220	7,067,219	12,454,666	17,256,834	15,778,776
Housing Benefit debt	8,352,255	8,289,183	8,080,449	8,667,087	8,632,539	8,447,884
Parking Services	2,800,371	3,425,473	3,526,192	4,451,650	4,692,186	4,876,618
Council Tax Note 2	4,524,303	3,822,875	3,866,556	6,940,774	6,262,466	7,601,390
Business Rates Note 3	1,147,749	972,883	654,794	2,558,946	2,160,057	2,857,363
Total	**29,231,042**	**30,098,634**	**23,195,210**	**35,073,123**	**39,004,082**	**39,562,031**

Note 1 This figure differs from the amount shown in Table 1 as it shows all debt, including that which is less than 30 days old.
Note 2 Council tax debt now includes unpaid council tax for 2017/18 in March 18 figures hence the increase.
Note 3 Business rates debt now includes unpaid business rates for 2017/18 in March 18 figure hence the increase.
Note 4 From April 2017 council tax and business rates debt is being reported and monitored different. From April 2017 we will report the gross debt position whereas previously we have reported the net debt position (netting off credits on accounts).

6.1 The overall debt outstanding has increased by £558,000 since last reported at the end of September 2017.

6.2 The data for March 2018 cannot be directly compared to March 2017 as council tax and business rates debts are now reported as gross figures and the delay in issuing invoices due to the implementation of E5 in February 2017.

6.3 Included in the £15.77 million sundry debt outstanding is £6.8 million of invoices that are less than 30 days old.

6.4 Detailed breakdowns of the Council Car Parking figures are shown in the table below:

Car Parking Aged Debtors – 31 March 2018

Age of Debt	Outstanding £	Number of PCNs	Average Value £
0-3 months	1,352,095	11,448	118
3-6 months	749,099	4,532	165
6-9 months	602,852	3,513	171
9-12 months	579,407	3,380	171
12-15 months	560,788	3,210	175
Older than 15 months	1,032,377	6,028	171
Total March 2018	4,876,618	32,111	152
Total September 2017	£4,692,186	32,080	146
Increase/-decrease	+£184,432	+31	

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